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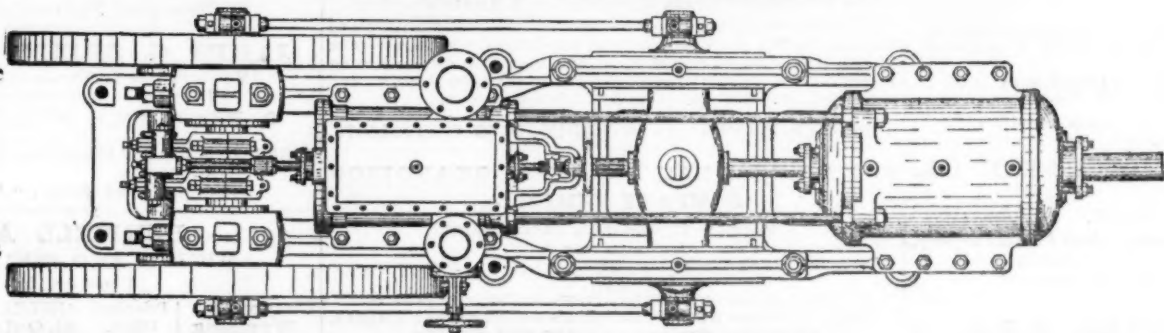
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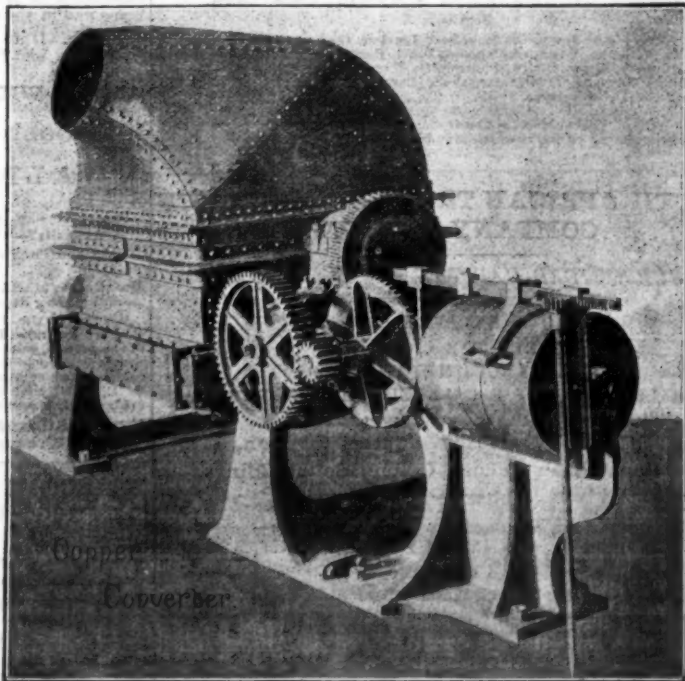
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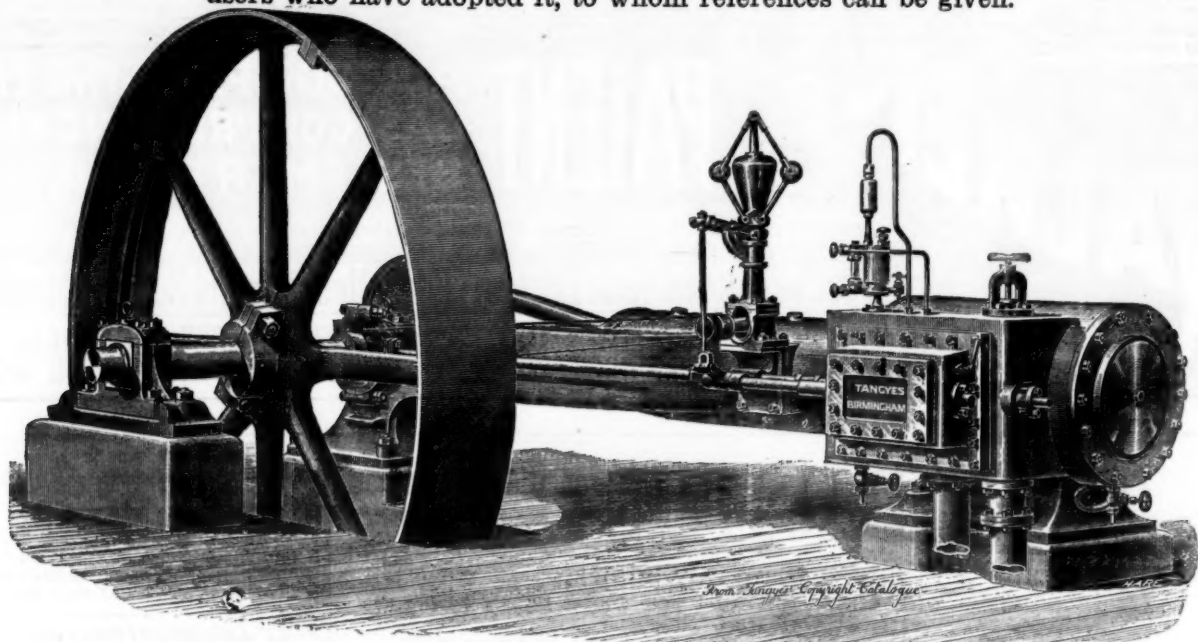
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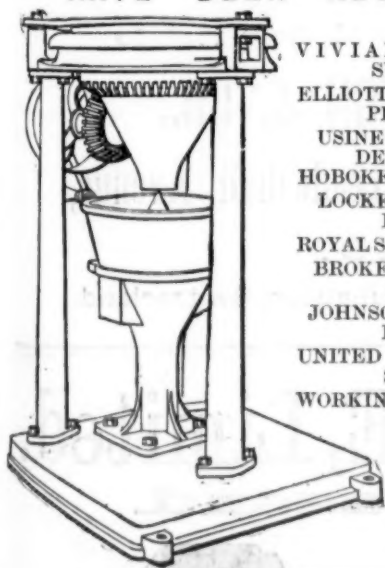
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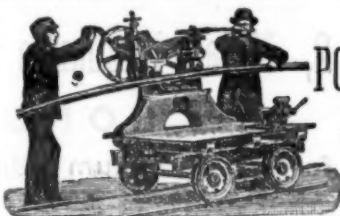
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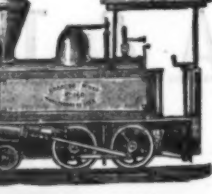
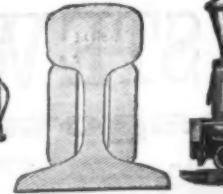
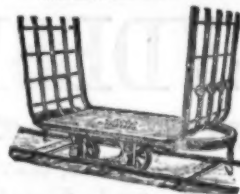
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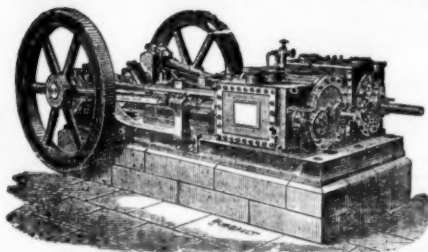
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SILVER MEDALS AWARDED AT THE ROYAL CORNWALL POLYTECHNIC, 1872 & 1876; GOLD MEDAL AWARDED AT THE GREAT INTERNATIONAL MINING EXHIBITION, CRYSTAL PALACE, 1890.

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GEORGE GREEN'S PATENT Self-Acting or Automatic Ore Dressing Machinery,

A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES—up to Five Tons may be treated, and the commercial value determined, in this way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.

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Gold Medal, International Exhibition, Paris, 1889.

Gold Medal, Exhibition of Mining & Metallurgy, London, 1890.

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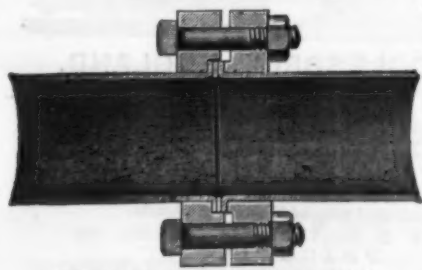
Light Lap-welded Wrought-iron and Steel Tubes

(SPECIALLY ADAPTED FOR MINES).

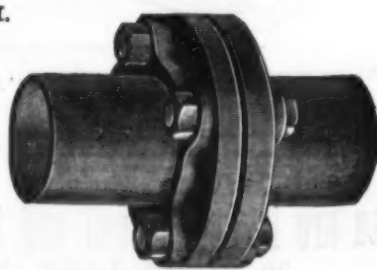
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 FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.

STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



SECTION OF PATENT FLANGED JOINT



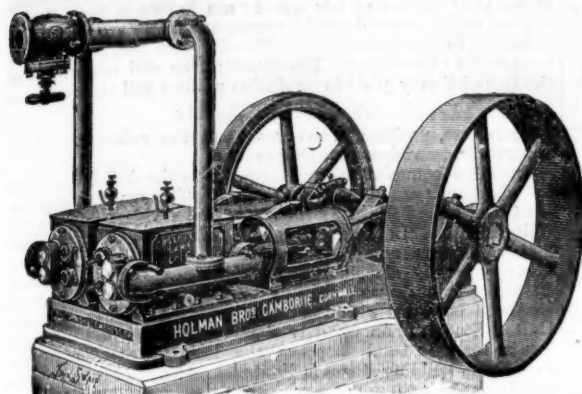
PLAN OF PATENT FLANGED JOINT.

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ESTABLISHED 1839.

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FIRST
SILVER MEDAL,
Highest Award,
Mining Institute
Contest, 1881.

Three Makers
represented.



FIRST
SILVER MEDAL
Highest Award,
Royal Cornwall
Polytechnic
Jubilee Exhibition
Contest, 1882.

Five Makers
represented.

AWARDED SILVER MEDAL INTERNATIONAL
INVENTIONS EXHIBITION, 1885.

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour.

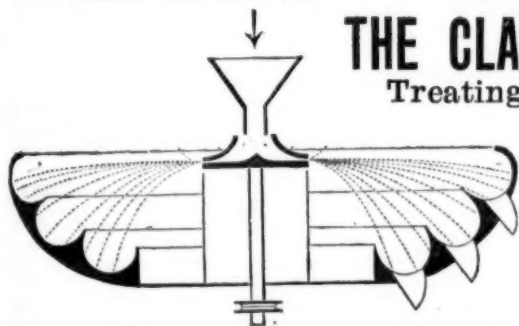
At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

Estimates for **ROCK BORING PLANT** and **GENERAL MINING MACHINERY** on Application.

London Representative: Mr. E. M. TOUZEAU, Leadenhall Buildings, London, E.C.

Highest Award at the Mining Exhibition, 1890.

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THE CLARKSON-STANFIELD CONCENTRATOR (LIMITED),

Treating the ores of Gold, Silver, Copper, Lead, Tin, Zinc, Cobalt, &c., &c. of all degrees of fineness, from 30 to the finest meshes by their **NEW MACHINERY** which may be seen in operation at

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Homogeneous substances, such as Emery, Glass, Sand, Sulphur, Black Lead, &c., graded according to size in one operation.

Terms for Experimental Concentration, and for Supply of Machines on Application.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

- 1473 William Wellins, 17, Coppice Street, Oldham.—An improved foot or hand power driving apparatus.—May 15.
- 1475 Alfred Eastwood and Isaac Moorhouse Livesey, 94, Margaret Street North, Ashton-under-Lyne.—An improved lock-nut.—May 15.
- 1478 Charles Arthur Allison, 57, Chancery Lane, London.—Improvements in spikes and nails.—May 15.
- 1479 George John Altham, 43, Lincoln's Inn Fields, London.—Improvements in governors.—May 15.
- 1482 Alfred Julius Boulton, 323, High Holborn, London.—Improvements in metallic packing rings.—May 15.
- 1485 Martin Hardsoc, 323 High Holborn, London.—Improvements in mining tools.—May 15.
- 1486 Ambrose George Fell, 8, Lord Street, Liverpool.—Improvements in methods of treating lead ores.—May 15.
- 1470 John Haythorn, 87, St. Vincent Street, Glasgow.—Improvements in water tube boilers and in tube fastenings for such boilers.—May 15.
- 1474 John Thomas McCror, 97, Newgate Street, London.—Improvements in furnace grates.—May 15.
- 1487 William Joseph Hallion, 70, Palace Chambers, Westminster.—An improved apparatus for locking nuts or bolts.—May 17.
- 1484 Edward A. Mohling and Alfred Steinbart, 323, High Holborn, London.—Improvements in pyrometers.—May 17.
- 1486 William Thompson, 6, Lord Street, Liverpool.—Improvements in pumps.—May 17.
- 1470 John Smith Baworth, 46 Lincoln's Inn Fields, London.—Improvements in steam turbines.—May 17.
- 1473 Harry Albert Penn, 17, Garibaldi Street, Plumstead, London.—A self-power generating engine.—May 17.
- 1482 William Chapuberrain, 45, Southampton Buildings, Chancery Lane, London.—Improvements in or relating to steam, air, gas, and vapour generators and motors.—May 17.
- 1487 John Handley Dales, 45, Louthouse Place, Leeds.—Improvements in steam and other motive power engines, and other machinery.—May 17.
- 1473 Conrad Sondermann, 73 Market Street, Manchester.—Improvements in and connected with the cylinders of engines, motors and compressors.—May 18.
- 1474 John Smith McAndrew, 110, St. Vincent Street, Glasgow.—A new or improved rotary motor.—May 18.
- 1472 Otto Friederich, 25, Southampton Buildings, Chancery Lane, London.—May 18.
- 1473 Thomas Harding, 37, Chancery Lane, London.—Improvements in picks.—May 18.

SPECIFICATIONS PUBLISHED.

1436, Behrend, steam and vapour engines, 1893; 1019, Hill, punching, drawing or compressing metals, &c. 1893; 11,169, Garnet, packing for piston rods, &c., 1893; 11,120, Brinkmann and Wolff, sheet metal boxes, 1893; 12,331, Hill, J. E., lamps, 1893; 14,337, Thompson, steam engines, 1893; 3893, Kruka, transmission of motive power, 1894; 6111, Wolff, mining lamp, 1894.

The above specifications published may be had of Messrs. Rayner and Company 37, Chancery Lane, London, at 10d. each including postage.

"STICKING TOGETHER IN ALL SORTS OF WEATHER."—The friendship between man and man which enables them to stick together in all sorts of weather is a friendship worth having. In times of prosperity some of us can hardly distinguish a friend of this kind from one of the other sort. But when the storm clouds gather, and we soon know who the true friend is. And when the clouds of sickness gather about us we turn naturally and instinctively to Holloway's Pills and Ointment. They are the only friends whose friendship is worth a rap at such times. We know it, and we turn to them, confident in the knowledge that they will restore us to health.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

* We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Coal, June 5 (Staines).—For the supply and delivery of 6000 tons of East Pontop, New Felton, or other gas coal, for the Staines and Egham District Gas and Coke Company (Limited). The deliveries to commence after November 1, and to continue during period ending September 30 following. Forms of tender, containing further particulars, may be obtained upon application to the secretary.

Bridges, June 5 (Taunton).—For supplying and fixing a Stoney's patent pinstock, 9 feet by 18 feet, two steel or wrought-iron bridges, building of walls, and other works in the French Weir Field, for the Corporation. Plans and specifications to be seen and particulars obtained of Mr. James H. Smith, borough surveyor, Municipal Office, Castle Green.

Coal, June 5 (Carlisle).—For the supply of about 18,000 tons of screened or unscreened gas coal, and about 4000 tons of canal, to be delivered at their works in Carlisle, in such quantities as may be directed from July 1, for the Carlisle Gas Committee. Forms of tender on application to Mr. J. Hepworth, Gasworks, Carlisle.

Footbridge, June 5 (Warkworth).—For the erection of a new cement concrete pier or pillar at Warkworth Footbridge, near Warkworth, for the Felton Highway Board. Plans and specifications can be seen on application to the District Surveyor, who will attend at the footbridge on June 2 from 12 noon till 3 p.m.

Bridge, June 7 (Aberdeen).—For the construction of a steel girder bridge, with masonry piers, side arches, and relative works, over the River Dee, at Maryculter, near Aberdeen, in accordance with plans and specifications, which may be seen with Mr. James Barrow, civil engineer, 7, Union Terrace, Aberdeen.

Colliery Timber, June 13 (South Helton).—For the supply of all kinds of colliery timber from July 1 to June 30, 1895, for the South Helton Colliery Company. Forms of tender and specifications with full conditions to be obtained on application to Mr. J. B. Lambert, South Helton, Southwold.

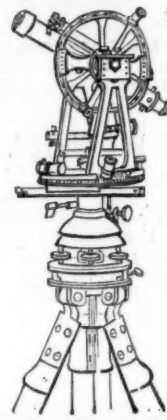
Reservoirs (Tottenham).—For the construction of a new reservoir and the enlargement of existing reservoirs at Stormal Hill Blachworks, Tottenham, for Mr. R. K. Roberts. Drawings and specification to be seen and all further information obtained on application to Mr. T. Nuttall, civil engineer, 12, Market Street, Bury.

Girders (Ryde).—For the supply of a large quantity of lattice girders for the bridges connected with a light railway in Mexico. Drawings and particulars can be obtained from Mr. R. F. Anderson, A.M.I.C.E., The Esplanade, Ryde, I.W., on payment of £2, which will be returned to all except the successful contractor.

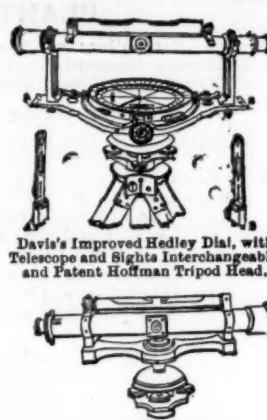
Colliery Stores (Penrhywceiber).—For the supply of stores and materials as follows, for the directors of the Penrhywceiber Navigation Colliery Company: (1) iron and steel; (2) castings; (3) bolts, nuts, rivets, washers and nails; (4) miners' lamps and lamp-glasses, &c.; (5) rubber, leather, waste, wool, bristles felt, packing and yarn; (6) steam, water and gummetal fittings, &c.; (7) ironmongery, tools, levers, &c.; (8) paints, brushes, brooms, &c.; (9) timber; (10) wire ropes; (11) lime and cement. All information and forms of tender may be obtained by applying to the Secretary, Penrhywceiber Navigation Colliery Company, Penrhywceiber, Glamorganshire.

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Gold Medal Awarded Mining Exhibition, 1890.
 "THE ENGINEERING TELEGRAPH CODE USED."

M. B. P. S. HAMILTON (late Chief Commissioner of Mines of the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING AGENT and MINING ENGINEER, HALIFAX, NOVA SCOTIA. PURCHASES and SALES of MINING PROPERTY effected, with careful regard to the interests of clients.

OUR INQUIRY COLUMN.

TO CORRESPONDENTS.

Correspondents will please take note that all communications will in future be answered in this column and not through the medium of the post. All questions and replies should be accompanied by the name and address of the writer.

REPLIES.

OLD SUBSCRIBER.—We cannot advise you to purchase them.

X. X. X.—(1.) We think it would be advisable to wait and see what construction the market will shortly put upon them. (2.) We advise you to treat these shares with suspicion. We have no faith in them ourselves. (3.) We think you would do well to keep them. (4.) If you can sell them at a fair profit, do so; if not, wait until the next dividend. (5.) We would rather you exercise your own judgment in this. We know but very little of the company.

CORNISHMAN.—We should advise you to hold the shares; they are a very fair speculation.

T. B.—There is little doubt that these shares will rise shortly.

S. F.—We should advise you to have nothing to do with the concern. It is by no means favourably known, and the management is of a questionable character.

W. T.—(1.) Yes. (2.) At their present price they are a very fair purchase. (3.) You are, of course, liable for the calls.

INQUIRER.—The circular is a biased one, and we should counsel having nothing to do with the speculation recommended therein.

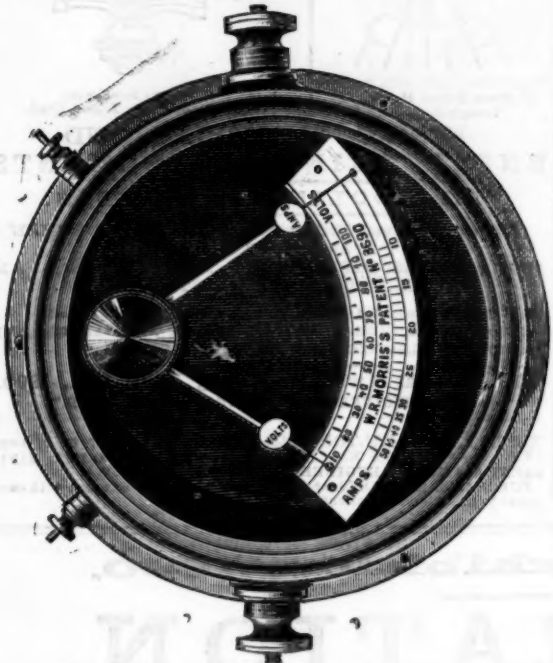
SOUTH WALES COAL TRADE.—The ordinary monthly delegate meeting of the Cambrian Association of Miners was held on Monday, at the Windsor Castle Hotel, Ton, Ystrad, under the presidency of Mr. Evan Owen Ferndale. The vice-chair was occupied by Mr. David Evans, Merthyr Vale, and the attendance included Mr. William Evans, one of the agents, and 10 delegates. It appeared that the workmen of the Abergorkey Colliery and the Tynybedw Pit, comprising 900 men, had rejoined the district during the previous month; while that day the workmen of the National Colliery, Wattstown, and the Gelli House-coal Pit were readmitted to membership. It was resolved that the question of balloting the workmen upon the Eight Hours' Bill be left in the hands of the executive committee and the agents. Reference was made to the dispute among the workmen of the Bate seam, Mardy, and it was agreed to urge them not to bring out their tools for another fortnight. In the event of a settlement not being come to, it was resolved that the men be supported from the district funds. The various collieries of the district were urged to send in their subscriptions towards repaying the amount advanced to Caerau workmen. A proposition from the Tylorstown Colliery with reference to paying delegates was ordered to be inserted on the agenda for the next meeting.

MECHANICAL ENGINEERING: MACHINERY, MINING and RAILWAY PLANT, &c.

Illustrated Descriptions of New and Standard Mechanical Appliances, Accessories and Processes, adapted to Mining, Metallurgical, Railway, Engineering and other Industrial Purposes.

A COMBINED AMMETER AND VOLTMETER.

THE instrument, illustrated herewith, is a very useful and compact meter. It consists of a strong brass case, 8 inches in diameter, with four terminals. The two small terminals are used for the volts, and the two large terminals are used for the amperes. It has two hands or pointers; on each pointer is a disc, with the word volts on one and amps on the other. By this ingenious plan there can be no mistake in the readings, and it will be noticed in the illustration that the disc on one pointer



is fixed higher than on the other. This arrangement allows both discs always to be seen, as one disc cannot come in front of the other and eclipse it. Another feature is a double scale—the top part is used for the volts, reading from left to right, and the bottom part is used for the amps, reading from right to left. It is not very easy to look at two instruments at the same time, though they may be placed side by side; but in this instrument we see at a glance what is going on, and by mentally multiplying the reading of the one pointer by the reading of the other, we at once get the number of Watts being used; this makes it also a Watt-meter, as each pointer is separate and distinct from the other. It can be used separately as a Volt-meter or as an ammeter, as the volt and amp circuits are entirely insulated from one another. We also notice that no printed dials are used; each scale is marked by hand during calibration and afterwards engraved. This method prevents any errors caused by the use of printed scales or dials. This is a point of great importance, and should not be overlooked by users of voltmeters and ammeters, the scale being unusually large the readings can be readily seen.

The principle of the instrument is the action of a solenoid on a suitably suspended piece of iron wire (which weighs only a few grains), and as there are no permanent or electro magnets or springs in them, they never require re-calibrating, the instrument is a gravity one and direct reading, and can always be left in the circuit. To use the instrument it is screwed up vertically, so that the hands point to zero; the two small terminals are connected across the mains, and the two large terminals are connected in the circuit; the current and the electro motive force will then be indicated at the same time. Let us suppose, for example, that the amp hand points to 28 amps, and the volt hand points to 80 volts, then the one multiplied by the other gives us 2240 Watts, and this divided by 746 gives us 3.1-3.73, which is the electrical horse power.—The patentee of this instrument is Mr. W. R. Morris, 34, Livery Street, Birmingham.

NORTH OF ENGLAND IRON TRADE.—The return of Mr. Waterhouse for the manufactured iron and steel trade of the North of England was received in the Cleveland district on Saturday by the Board of Conciliation and Arbitration. The return shows a little improvement in trade as compared with some time past, there being an addition in the net average price for March and April, being the rate for rails, plates, bars and angles to £4 17s. 8d., as compared with £4 16s. 9d. in the previous return. The production of the four classes of iron was 26,928 tons, as compared with 26,489 tons for January and February. There is an advance by this return of ironworkers' wages by 2½ per cent., the first for a long period, wages having been previously declining for some years. The ironworkers' wages are ruled by a sliding scale.

MINERS' WAGES IN SCOTLAND.—A special conference of the Lancashire and Cheshire Miners' Federation was held at the Miners' Hall, Wigan, on Monday, to consider the threatened reduction of miners' wages in Scotland.—Mr. Sam Woods, M.P., presided.—The proceedings, which were held with closed doors, lasted for three hours.—The following resolution, which was adopted unanimously, was afterwards communicated to the Press: "That the Lancashire and Cheshire delegates be instructed to urge the Scotch miners to submit to no reduction whatever in their wages, and that, if the miners are locked out through resisting any reduction, we are favourable to a levy being made upon our members to support them." The decision of the Lancashire and Cheshire Federation is, therefore, practically identical with that of the Yorkshire Miners' Association.

PIT ACCIDENT AT WIGAN.—A shocking colliery accident occurred at Wigan on Saturday morning. Three men, named Michael Spellman, Patrick Doherty, and Simon Connolly, were working at Messrs. Ryland's colliery, when a fall of roof took place, completely burying them. Connolly succeeded in extricating himself from the debris, and found a large stone weighing several 100 cwt., on Doherty. The two men were buried about three hours, and no hope of their being rescued alive was at one time entertained. At one o'clock Doherty was brought to the surface, and it was found he had received fearful injuries, one of his arms having been wrenched away from the body. Spellman was recovered soon afterwards, and was found to be suffering from fractures and internal injuries. The men were conveyed in an ambulance to the infirmary, where a staff of surgeons attended them.

THE MINERALS OF NOVA SCOTIA.

By EDWIN GILPIN, A.M., LL.D., F.G.S.

(Concluded from page 589.)

MINING costs vary with the conditions of each vein, but it may be asserted that the expenses of mining, pumping, and hoisting are lower than in any similar class of works elsewhere. The compact nature of the rocks renders the workings, when proper precautions are taken to exclude surface waters, so dry as to give very small pumping costs. The quartz passes from the mine without dressing, &c., to the mill, which is usually driven by steam. The mills are almost invariably stampers, and vary in size from 5 to 35 stamps. The pattern of the mills is based on the best United States models, with improvements suggested by local experience. As the quartz carries its precious burden as coarse and free gold, amalgamation is carried on in the mortar and on plates. The gold bullion is of good quality, carrying little silver, and averages, I believe, about \$19.25 at the mint.

The production of gold during the year 1892 was, in round numbers, about 20,000 ounces, from a dozen localities. The business, although small, is when pursued methodically remunerative, and is capable of unlimited extension, as there are numerous anticlinal unworked and many more to be discovered in unexplored districts. The mines are all within easy reach of roads, and of the harbours along the coast, and aid is furnished by the Provincial Government in opening roads to new mines. The Nova Scotians make excellent miners, and prefer this work to almost any other occupation.

Gypsum.

Few countries show such wide-spread and valuable deposits of gypsum as Nova Scotia. Here the mineral, as soft and hard gypsum, occurs with limestone, in measures of lower carboniferous age, in immense beds, frequently running for miles in white cliffs. Owing to facilities for shipment, the greatest development of gypsum mining has been effected in the vicinity of Windsor, in Hants County. The annual export from this district is about 150,000 tons, valued at about \$1 a ton. The rock is taken from open quarries, trammed to the vessels, and shipped to the United States, principally for agricultural purposes, although a considerable amount is used for constructive purposes. Numerous deposits occur in the Island of Cape Breton, and are utilised to a small extent for shipments to Montreal and United States ports. The mineral is found of every grade of quality, and in many of the quarries it is of almost chemical purity. Locally it is used to a small extent, either applied directly as a dressing to the soil, or as the basis of several forms of fertilisers. The total production for the year 1892 may be estimated at about 170,000 tons. Free sulphur, borates, and salts of magnesia, occur in the gypsum, but are not as yet found in quantities of economic value.

The occurrence of salt as crystals and layers in the gypsum, and in the form of brine springs in connection with the marls, &c., accompanying it, lead to the belief that boring operations would disclose workable deposits of this valuable mineral. As yet, however, no attention has been paid to this subject.

Antimony.

Some years ago a valuable mine of antimony ore was worked at Rawdon, in Hants County. Owing to legal and other troubles the mine has remained closed for some time. The ore was of good quality and decidedly auriferous. As the district in which the deposit was worked shows traces of ore over a considerable extent of ground, it is probable that additional veins will be found.

Barytes.

Sulphate of barytes is found at Five Islands, River John, Gay's River, Loch Lomond, &c. It has been worked intermittently at these places to supply local works. The output seldom exceeds a few hundred tons in any one year. Carbonate of strontium is noted by the officers of the Geological Survey as occurring at several points in the lower carboniferous limestones in Cape Breton.

Manganese.

Manganese ores are common in the carboniferous and Devonian rocks of several parts of the province. The most continuous mining of this ore has been carried on at Tony Cape, in Hants County. Here the ore is a very pure binoxide, presented as pockets and irregular veins in limestone. The annual production from this district has seldom exceeded 200 tons, most of which, it is said, is used by glass makers. There is a large district here showing signs of this ore. Near Truro, and in connection with the limonite deposits of Pictou County, considerable amounts of a similar grade of manganese ore have been mined at different times. In Cape Breton County, near Loch Lomond, a very good quality of the ore occurs in connection with limestones and slates, and is worked to a small extent. Hitherto only the high grade ores have been worked in Nova Scotia, and I am not aware of any deposit having been found adapted to the iron and steel makers' use. It is, however, reasonable to expect that where the ore is so abundant in its more concentrated state, that bodies must exist mixed with iron, &c.

Copper.

The copper ores of Nova Scotia have hitherto received little attention beyond attempts by local parties to open the more promising prospects. The upper carboniferous measures, extending through Pictou, Colchester, and Cumberland counties, show at numerous points sandstones containing copper ore, frequently of high grade, but hitherto the deposits have proved too irregular for systematic mining. In the county of Antigonish, in Devonian strata associated with dioritic dykes, some copper pyrites deposits have been developed enough to show good promise. The distance of the ores from shipping and the price of copper has, however, discouraged further work.

In the Island of Cape Breton the traces of copper are widespread, and promise that some day Cape Breton will prove like its neighbour, Newfoundland, the seat of an important copper mining industry. The felsites, &c., of Laurentian age seem to be the principal copper containing rocks. At Coxheath, near Sydney, the Eastern Development Company, of Boston, are gradually developing a property which promises to become an important copper producer. This locality being close to iron ore, and limestone and coal, and on tide water, is unusually well situated to form the site of an important centre for smelting the copper ores, not only of Cape Breton, but of the Gulf of St. Lawrence, Newfoundland, &c. The commencement of copper smelting at this point will undoubtedly direct the attention of prospectors to the numerous signs of copper ore in Cape Breton, and the supply of ore in large amounts can be safely calculated on.

Lead.

The carboniferous limestones of Nova Scotia, already mentioned so frequently in this sketch, are frequently met carrying lead ore, as galena. Usually the ore as observed is finely disseminated, or segregated into small veins. At several points, however, in the Stewiacke district, in Halifax county, especially

at Pembroke and Smithfield, the bodies of galena are large and important. At the latter point a deposit has been proved to contain ore in quantity to permit of working. There is a probability of this deposit being opened out and utilised in the near future for supplying the home market, which is of considerable dimensions. As a rule, the silver percentages of the Nova Scotia galenas are not high, when they are met in the limestones, but samples from veins in older rocks have shown promising contents of both gold and silver.

Molybdenite is found at several points in Lunenburg and Cape Breton counties in quantities which would repay working. Deposits of pyrites of fair quality are known in Cape Breton county, and in some deposits copper and nickel are reported as occurring in small quantities. No attention has, however, yet been paid to these ores. The triassic trap and amygdaloid of the Bay of Fundy yield in profusion zeolites and the associated

Varieties of Quartz.

and nowhere, perhaps, in the world can the collector of these minerals find a richer gathering ground.

The more common minerals applied to the builder's art are abundant and varied in Nova Scotia. The marbles, granites, redstones, &c., of Nova Scotia should find a wide market in the United States. In the counties of Cumberland, Colchester, and Pictou there are numerous deposits of sandstone or freestone of every variety of colour and texture. Quarries have been opened at points most accessible to shipping, and a small trade has been built up with the neighbouring provinces and the United States. As wood is almost universally used in Nova Scotia for structural purposes, the local market for all the varieties of building stones is limited. At numerous points on the Atlantic shore, the granites, already referred to in connection with the districts, furnish excellent stone, of different textures and shades. Small amounts have been used at Halifax in the fortifications, and for foundations, &c. A quarry at Shelburne yields stone satisfactorily used for street paving, and superior to the imported article. The carboniferous limestones are sometimes used for structural and railway purposes. The Cobequid Mountains and some districts in Cape Breton contain syenites, red granites, gneisses, &c., of excellent quality. None of these stones have been quarried.

At West Bay, Ben Eoin, East Bay, and other points in Cape Breton are deposits of marble of good quality and many beautiful shades. The Bras d'Or Marble Company have begun a quarry for marble on their property at West Bay. The quality of their rock appears excellent, and it should commend a ready sale. There are large amounts of this marble burned into an excellent lime for use locally and in the neighbouring provinces. The measures already referred to as yielding building stone in Pictou, Colchester, and Cumberland counties also yield stone, worked to some extent at Lower Cove, Cumberland county, into grindstones, snathes, whetstones, &c. In connection with this reference to building stones and abrasive materials it may be mentioned that deposits of tripoli, infusorial earth, and emery sand are met at numerous points, but have not hitherto been utilised.

Clays suitable for firebrick abound in the coal measures, and the manufacture of this article should pay well as there is considerable local demand at the collieries, furnaces, &c. A few small potteries supply the home market. The deposits of brick clay are abundant and excellent.

Improved Methods of Manufacture.

producing a better quality of brick, would greatly extend its consumption, as in the cities and villages the superiority of brick over wood for dwelling houses is being recognised more and more.

From these very brief notes it will be seen that although the area of the province is small, its mineral resources are large and varied, and the slow rate of their development is due chiefly to the inclination of the people to engage in the pursuits of fishing and lumbering, which yield ready returns with a small outlay of capital. The consolidation of the principal collieries of the Sydney district, under a wealthy syndicate of capitalists in the New England States, with a view to developing a large export of coal to Boston, &c., shows that outside attention is being drawn to the mineral resources, and it is believed that this is but the commencement of a large and wide-spread interest in the capabilities of Nova Scotia.

The coal, gold, copper, lead and silver ores are all held by the Crown, and can be leased on easy terms. Part of the iron ore is held in a fee simple by the owners of the soil, and part belongs to the Crown. Licenses to search, covering 5 square miles, and running for 18 months, can be procured for \$30, and a lease of the mineral sought can be selected out of the license. The leases are of various sizes up to 1 square mile in extent.

The Gold and Silver Leases

are for 40 years; those of other minerals are for 80 years. These leases carry power to expropriate any surface lands needed for mining purposes, and are unusually favourable. The royalties are on coal 10 cents a ton, on gold 2 per cent. on the bullion, valued at \$18.50 an ounce. The iron ore royalty is 5 cents a ton, and so on.

The advantages of these titles, proceeding directly from the Government, are evident, and are much appreciated by mining people, who find that they are met in coming to Nova Scotia, not by grasping private individuals, but by a Government anxious to promote the development of mining.

PETROLEUM.—In his report on the trade of Batoum for the year 1893, the British Consul refers to the successful introduction of an important feature by a London firm into the carrying trade of petroleum from Batoum to Eastern ports, beyond the Suez Canal, in the shape of tank steamers of a new type which carry oil in bulk, and which, after thoroughly cleansing their tanks with, comparatively speaking, quick despatch and little expense, by means of forced ventilation, pressure of steam, and chemical treatment, are enabled to load homeward-bound cargoes, such as tea, coffee, rice, and other goods particularly liable to deterioration, and deliver them in good order and condition at Mediterranean, Continental, and United Kingdom ports. Great Britain took 2069 tons more Russian crude oil in 1893 than she did in 1892, 14,095 tons more lubricating oil, 4891 tons less distillate, and 17,861 tons less kerosene. The quantity of tin-plates imported to Batoum from Swansea in 1893 shows a falling off of 3796 tons, and the coal figures have undergone a further decline, only 1208 tons for consumption at the several petroleum can and case factories having been imported during the year. A coal dearth was again experienced at Batoum during the past winter, and exorbitant prices are still being paid for coal for domestic purposes owing to the short production at the Russian coal fields on which the Black Sea ports are dependent for their supplies. It would, therefore, be a great boon to the inhabitants of the town and surrounding country if the much-talked-of reduction in the import duty now charged on foreign coal was sanctioned by the Government.

MIDLAND IRON AND STEEL WAGES BOARD.—A meeting of the sub-committee of the Midland Iron and Steel Wages Board was held on Monday at Birmingham. The accountant's certificate stated that for the months of March and April the net average selling price of iron had been £6 0s. 3½d. per ton. In accordance with the sliding scale, the rate of wages for puddling continued unchanged at 7s. 6d. per ton, and millmen's wages in proportion from June 4 to August 4.

SPECIAL CORRESPONDENCE: COLONIAL AND FOREIGN. MINING IN SPAIN (ASTURIAS).

(FROM OUR OWN CORRESPONDENT).

GIJON, MAY 18, 1894.

THE anthracite deposits of Colunga and Villaviciosa are of little commercial importance, although they hold five seams of a metre thick, which, to some extent, have been opened up with poor results. These deposits are made up of shales, dark sandstone, and occasional beds of limestone, all having the fauna and flora of the true carboniferous. The general siliceous conglomerate bank is also present.

The Villaviciosa patch is overlaid on the north, south, and west by the trias, the contact bed being the keuper conglomerate; on the east it is cut off by a mass of dark and green diorite and dykes of porphyry. The altering of the coal to anthracite may be set down to the influence of these masses, which have also metamorphosed the keuper for some distance, giving the marls in some instances the appearance of stratified porphyry, in others that of a felspathic and chloritic arkose.

The Colunga deposit is covered on the west by the same trias, on the north by the jurassic, and on the south it underlies the general cretaceous belt. On the east the mountain called Puerto Sueve covers it. This mountain is peculiar. It is comprised of a white-grey limestone, charged at its base with encrinites and small flint nodules, and there are occasional thin veins of fluor spar and sulphate of barium. Whilst on the north-west it rests on the carboniferous, on the south-east it lies on a quartzite bed nearly a thousand feet thick. The south lies on a bed of dark shale, having a concordant dip with the overlying limestone mass. The length of this mountain is about 5 miles, its width is about 3, and its greatest height 4034 feet. Its isolated position and rugged aspect gives it a majestic grandeur. On a clear morning the whole coast line from Cape Ortegal to Biscay can be seen from the highest peak, and the splendid panorama of the interior of the province well repays the fatigue of climbing from the village of Cofino at its foot to its summit. An occasional bear may be met with in the upward journey to vary the emotions, and give zest to the climb. Wolves were formerly numerous, but they have now disappeared. The roebuck and ibex can be hunted here by those who are nimble of foot. The pastures on the summit give food to a hardy race of sure-footed small horses, second to none for rough mountain work.

This limestone mass may be set down as posterior to the carboniferous, but its exact position in the geological series has not yet been decided. Schulz, in his Geological Description of Asturias, puts it down as permian. The absence of the lower red sandstone and its paucity in fossils seems to contradict this; but, on the other hand, there is no equivalent limestone bed in any of the higher known formations.

The Colunga deposit has several irregular seams of anthracite; these, like those of Villaviciosa, owe their alteration to the eruptive dykes referred to above. Both may be looked upon as the most northerly cropping of the central coal field, out through by the dykes, but otherwise continuous under the trias and cretaceous that overlay between them. The thickness of these superincumbent beds will be an obstacle to the successful working of the coal measures below them, until scarcity of fuel and the advance in methods will bring them into production. That day is as yet far distant.

The rich carboniferous measures so often mentioned have a general width of 18 miles, and a length of 17, covering a superficial area of 306 square miles. They are comprised of the characteristic shales, alternating with dark grey sandstone and clays, and banks of limestone, also a thick bed of siliceous conglomerate. The series enclose numerous seams of coal.

Some districts included in this area, especially the southern portion, have not been explored. These have been broken up by the upheaval of the Cantabrian mountain range, and so altered by denudation that in all probability any coal that may remain will be so faulty as to preclude any prospects of good results in working. Prior to this upheaval the formation had a much wider extension, as it continues in the province of Leon, to the south and south-east of this great mountain chain, holding abundant workable seams of good coal. These were referred to in the Journal issued 23rd September, 1893.

After making every allowance, the area of these questionable districts may be taken at 183 square miles, leaving, therefore, 173 square miles of surface for good strong workable seams.

The lateral pressure caused by the upheaval of the Cantabrian range has undulated the whole of the field, causing the strata to form great anti and synclinals, with proportionately little faulting and crushing of the strata. By this buckling of the strata the seams of coal appear through repetition to number over 70, whilst, previous to this movement, the plane workable seams would probably have been 10, with an average thickness of a metre each.

The estimate of the quantity of workable coal in the field has entailed a long study of it on the spot, and the result is, of course, only approximate, as all such calculations must be, where the seams are not in one continuous line of dip. After taking into consideration the denudation of the saddles of the anticlinals, squeezes, and ruptures of synclinals, faults, and coal worked out up to the present, it is estimated that there exists to be worked out 11,336,000,000 tons. The respective patches already reviewed will hold an additional 2 per cent. of the above quantity. Mons. Viret d'Aout, (Mem. Soc. Ing. Civils Paris, 1874, p. 311) estimated that the quantity of coal to be worked out of this field would not be less than 11 milliards of tons. The pitches of the exterior seams on the sides of the anticlinals are at about 33° northerly and southerly, whilst those nearer the vertical axis have a heavier pitch. This configuration of the surface greatly facilitates the working of the seams, since where their run permits galleries are driven in them from the outcrop without any deadwork to stop the way to small capitalists, as from the commencement they have coal to sell, the value of which more than covers their expenses. These galleries are put in at different levels, and a winze from one to the other in the coal establishes ventilation. In some of the mines there are as many as ten levels, with a solid back between each of from 20 to 30 metres each. Work is continued upon this one seam until the whole of the coal from it up to the boundary is completely drawn. As the cost of working is low, since, as a rule, there is a strong roof and a proportionate economy in timber, without any drainage or ventilating cost, when the first seam is exhausted the checker is in a state to allow cross cutting into another or more seams, which in their turn are subjected to the same procedure. Of course, by the outlay of a comparatively small capital the whole of the seams within the mine boundary could be opened up at once, and a large output through the one travelling gallery assured. But with the exception of nine companies on the ground, this outlay could not be made by the owners. Thus

the work goes on very slowly, sufficient to satisfy the wants (and a little to spare) of the owners, who have the two features of cupidity and ambition absent in their constitutions.

The exceptions mentioned work in a different manner. They first outlay the necessary capital for preparatory work in the mines, in tramways to connect them with the railway sidings, in the installation of machinery for washing their small coal, and sizing it, for modern systems of coke ovens (none, however, saving their bye-products), and in one instance in the laying down of the necessary plant for the manufacture of patent fuel on a large scale.

These being limited companies, they have to look to the satisfying of their shareholders by paying them good dividends, and work with a view to getting the largest output they can for their outlay. They are, of course, differently situated to the small owners, who have no one to please but themselves, and are satisfied when they can, with only a nominal outlay for tools and timber, begin to sell coal without looking forward to tomorrow.

These small proprietors wash their small coal by means of hand jigs, comprised of a fixed square box having a side of 5 feet and 3 feet deep. A space of 1 foot wide is divided off at one side to receive the water, and the remainder is occupied by a frame 8 inches deep, having generally a hurdle bottom. This frame is attached to a heavy lever carried over an upright from the box. The coal is filled 'on to the hurdle by one woman, whilst another attends to the lever, and works it up and down: Gravitation separates the shale from the coal. The coal is shovelled off the surface, and wheeled to the heap or railway truck, the slate in turn being cleared out and taken to the tip, and a fresh load put on to the frame piston, and thus the work continues. Two women work each of these washers, and they should wash each day (from sunrise to sunset) sufficient to produce 6 tons of clean washed small coal. Of course, there is a great loss of fine coal carried off in the sludge, but as these people have no coke ovens, they have no means of utilising it, and, therefore, when the boxes become filled they open their gates, and stir it up to be carried into the nearest river, and small coal travels far, as at Pravia, 27 miles from the nearest colliery, the smiths secure a good portion of the coal they use by washing it out of the sand banks, where it has been deposited by the River Nalon, having travelled all this distance.

(To be continued.)

OUR SOUTH AUSTRALIAN LETTER.

IMPROVED PROSPECTS.

(FROM OUR OWN CORRESPONDENT.)

THE MINING JOURNAL of March 17th, just to hand, containing my letter of the previous month, with the heading "Still Searching for Gold—More Energy than Reward," induces me to write at once some account of the improved circumstances which now prevail. You have heard something of them since March 17th, but almost every week our prospects are looking brighter. Discoveries, which a month ago were spoken of only as hopeful or promising, are now proving to be payable, and showing every indication of permanence. More than this, some of the new finds are turning out even richer than they were at first represented. The Mount Pleasant field is yielding payable stone from the reefs, as the work of sinking and driving progresses, and whereas only one reef was supposed to exist when the first discovery was made, a parallel reef on either of the first is being opened, that on the west showing almost as rich stone as the original. The latter, too, is being proved good farther south on its course. The first parcel of 200 tons of stone from the Black Snake Mine, near Blumberg, and about four miles from Mount Pleasant, and which has been treated at the Government Cyanide Works, has given satisfactory results, 90 per cent. of the gold having been saved. The final result is not yet publicly known, but is believed to be over 2 ounces of gold per ton of stone. Other mines in the neighbourhood are also doing well.

An interesting account of the latest discovery—at Nillinghoo, about 30 miles N.N.E. of Wankaringa—has been supplied by Mr. Cockrum, the owner of the sheep run where it was found, and a man of 40 years' experience in mining. He states the lode to be 120 feet wide, and has tried several samples from different parts of the reef, the results obtained being from 3 to 7 ounces of gold to the ton of veinstone, the average being probably 3 to 4 ounces in bulk. The veinstone consists chiefly of ironstone intermixed with quartz. Costeasing pits have been cut across the lode, one of them being 30 feet in length and 10 feet deep, showing gold throughout. On an adjacent claim, on Look-out Hill, three costeasing pits have been cut from 12 feet to 70 feet in length, samples taken averaging from 3 to 5 ounces of gold per ton. The gold, though frequently visible to the eye, is generally fine and well disseminated through the stone. A good well of water capable of watering 30,000 sheep is only three miles from Look-out Hill, so that it is probable water could be obtained by sinking in the neighbourhood. The locality is 50 miles N.N.E. from Yunta Station on the Broken Hill line of railway. Another good discovery near Wankaringa, called Lovely Gully, is also opening up well.

A small gold field at Moppa, near Kapunda, and which is said to have yielded over 200 ounces within the past three months, is beginning to give rather better returns. About 40 men are at work on the ground, and a syndicate has been formed especially to search for the reef.

Yet South Australians are so infatuated with West Australian gold (including "Wild Cats") that there are but few who will go into anything in their own colony. I have two or three really genuine gold discoveries in hand, and can't raise £100 to prove them, though I firmly believe they are worth far more, and would give more payable returns than half the West Australian ventures, which are rushed up to fictitious prices. Then in this colony the cost of working the mines is only about a fourth of what it is in the West. One of my discoveries is a splendid piece of ground for hydraulic sluicing, with a fine supply of water and gold visible in the soil.

FATAL COLLIERY ACCIDENT.—On Tuesday, at Lord Durham's North Biddick Colliery, near Penshaw, John Kinross, employed as a bankman at the above place, was engaged with some timber about the cage at the pit bank when he slipped or overbalanced himself, and fell down the shaft. According to another account, he was riding in the cage from the Neapstead level to the lower level, but stepped out before the cage stopped, and, losing his balance, fell headlong down the pit shaft, a depth of 250 yards. When the body was recovered, it presented a frightfully mangled appearance, and death must have been instantaneous. He was a married man, and greatly respected in the district of Washington. The pit, which was at work yesterday for the first time since Tuesday, May 22, was again laid idle, according to the prevailing custom in the county.

OUR PARIS LETTER.

Position of copper.—South African mining shares.—Mining enterprise in Algeria.—Placer mining in Italy.—Foreign trade in iron and steel.

THE metal markets are not without certain indications that afford substantial hope of a recovery in some branches of metalliferous mining. Prices are certainly far from being satisfactory, but they do not at all events show a tendency to decline, and in a few cases there is a perceptible firming up of metal values. This may be due entirely to the speculation which is now and then indulged in, but it is so far encouraging that a few months ago it would have been impossible by these means to give the market even a semblance of strength. Copper has benefited in this way to an extent that requires very little stimulus to cause it to take an upward turn. If it were not for the conviction that an advance in prices would infallibly bring about a heavy influx of metal, the position of copper would probably now be a very satisfactory one, especially in view of the fact that the increasing consumption has already reduced the recent heavy stocks to a comparatively low point. At the same time there is no longer any fear of the market being swamped by secret reserves, and this serious hindrance to any recovery in copper has entirely disappeared. Another thing that is supposed to have a favourable influence upon the market is the re-entry into the Société des Métaux of M. Secrétan, who was so closely identified with the collapse of that body a few years ago. This reappearance of one of the prime movers in the disastrous copper "ring" has naturally been severely criticised, but it is generally conceded that the knowledge and experience of M. Secrétan are indispensable in the present difficult position of the metal.

This perceptibly stronger tone of metal values has had an excellent effect upon metalliferous mining generally. The confidence with which speculators are dealing in mining scrip has communicated itself to the investing public, and holders are showing a much less disposition to sell than they have done for a long while past. It is certain that there is not now so much of the distrust that has hitherto characterised nearly every description of mining investment. The demand for South African gold shares has been greatly stimulated by the favourable reports lately issued by the principal companies, and during the past week values all round have undergone a notable advance. Robinsons are in especially good request at the present moment, and are being freely bought at 160 fr. This success of the English companies has encouraged French capitalists to make renewed exertions to improve their position in South Africa. The Champ d'Or Company has threatened on more than one occasion to succumb to administrative difficulties, but these now seem to have been removed, and the re-adjustment of affairs upon a new basis ought to give this concern a prosperous future. Altogether, the outlook for South African gold mining enterprise is reassuring.

Probably a great deal of attention will be paid before long to the steps that are now being taken to develop the mineral resources of Algeria. This colony is exceedingly rich in nearly all the metals, but principally in copper and iron. Unfortunately, the work of exploitation is hindered at the present moment by the want of proper transport facilities which will not allow of the metal being shipped at a price low enough to secure a profit. This, however, may probably be only a temporary inconvenience, as the Government, though slow in its movements, has yet recognised the necessity of aiding in the development of the North African mineral deposits, and a new system of railways is about to be carried out in Tunis and Algeria. Until this is done the different mining companies are unable to carry on operations upon a large scale. It is thus that the Mines de Monzaia finds itself impeded by the difficulty of delivering its ore cheaply at the port of shipment. This company possesses an important concession at about 80 kilometres to the south-west of Algiers. The property contains extensive deposits of argentiferous and other copper, as well as considerable supplies of iron ore, which assays from 58-703 to 60-70 per cent. of metallic iron, from 1-30 to 1-34 of manganese, only a trace of sulphur, and no phosphorus. The company is only at present in its initial stage. It has spent about £14,000 in experimental workings, and the results are said to fully justify the hope of a very prosperous future. Unfortunately, before it can be set to work, it is necessary to secure some reduction in the present cost of transport. The concession is tapped by a railway going to Algiers, but the cost of conveying the mineral is 7 centimes per ton per kilometre, whereas the company states that it cannot work the property unless the cost is reduced to 2½ centimes per ton per kilometre. This matter is now under the consideration of the French Government, and unless the negotiations are, as usual, long drawn out, the reduction will certainly be made. Until this is done the company is unable to carry out its contracts, one of which is for 500,000 tons of iron ore for delivery into England over a period of five years. In the meantime the company will continue to work the copper deposits, and for this purpose it is proposed to lay down a hydraulic installation. The company states that, once the railway tariff is reduced, it is assured of a prosperous future, for the reason that iron ore can be sent to England at an exceedingly low price. Algiers has superseded Malta as a coaling station for British ships, as Malta is found to be too near to Port Said for this purpose. A large number of vessels consequently bring Welsh coal to Algiers, and as they return with nothing but ballast, iron ore could be conveyed under very advantageous terms. Having now sunk its preliminary capital in experimental workings, the company is seeking something like £100,000 to enable it to thoroughly develop the property.

The Société des Placers Aurifères de la Haute Italie has been little affected by the adverse criticism which it was at one time the custom to lavish upon it. This company is working probably the oldest gold field of which we have authentic mention. The River Tesin in Upper Italy has been celebrated from antiquity for the yellow metal that was brought down by the stream, and it is considered that the bed of the river, to a depth of 15 or 26 feet, is rich in gold. The Placers de la Haute Italie is a Swiss Company, but about two-thirds of the shares are in the hands of French capitalists. A year or so ago a great expenditure was made in the purchase of excavators and other machinery, but for some reason or other the results did not justify anticipations, and the shareholders grew seriously alarmed at this want of success. Engineers were sent to Upper Italy to see what was amiss, and their reports were entirely reassuring. Since that time the output of gold has been steadily increasing, and the scrip now occupies a very prominent position in the share market.

The statistics of foreign trade continue to show an unsatisfactory state of things. During the first four months of the year the imports of finished iron totalled 12,052 tons, as against 9759 tons in the corresponding period of 1893, and manufactured steel amounted to 2691 tons, as compared with 2622 tons. The exports of finished iron fell from 6788 tons to 6733 tons, and manufactured steel improved from 1991 tons to 5120 tons, of which latter total rails counted for 4612 tons.

A NEW FIELD FOR NAPHTHA AND PETROLEUM INDUSTRY IN NORTH RUSSIA.

By JOHN ROBERTS, M.E.

No. II.

THE deepest shaft ever sunk in the whole region is 52 metres, or about 168 feet. This was done by M. Sideroff in 1878. On account of his having broken the trepan, he proceeded no further with the boring. The borings passed through, in that depth, eight beds of naphtha, of which four were at a depth of about 14 feet (4·57 metres), and it is estimated that there are 5 feet of petroleum in a depth of from 70 to 80 feet.

It is stated that in proportion as the depth increased the flow of naphtha increased, and from that time to the present day the man in charge of this bore-hole sells about 6 tons of naphtha per year at from 1½ to 2 roubles per pond. That would be from 3s. to 4s. for 36 lbs., or an average of £11 per ton. This naphtha has such lubricating qualities that the steamers plying on the Petchora River use it in its natural state for that purpose.

From these trials it has been demonstrated that the naphtha found in these beds, which originally contained none, must have filtered through the falls, and that the more considerable flows are to be found below the beds impregnated with petroleum at a depth of from 110 to 130 yards, which is a depth very favourable to economical working. At Baku the bore holes are more than 200 fathoms deep, and at Pennsylvania from 300 to 350 fathoms. It must, therefore, be clear that the difference in the cost of working must be enormous.

It is assumed, and not without good reason, that as the stratification above the beds containing the original sources of naphtha is almost horizontal, the flow should be very even from the naphtha beds, which are also horizontal, and when the bore hole reaches them, the stream, if it rises at all, should not rise with the force that it does at Baku, where it spouts like a fountain to a considerable height in the air, causing naturally great loss. It is assumed that in the north, when the bore holes have once reached the beds of naphtha, there will be no necessity of sinking them deeper, whilst at Baku they are under the necessity of increasing the depth by 40 to 60 metres every year. This is on account of the large angle at which the beds dip. After extracting about 1,600,000 tons it is necessary to sink 20 metres further. In 1891 the quantity of naphtha produced was 5,000,000 tons, and the level to which it was found necessary to sink to keep up with the sale of naphtha was 60 metres. It must be evident, therefore, that in the near future the extraction of naphtha at Baku will become very costly. The cost will increase, and the production decrease. All these considerations are in favour of the fields in the north.

With regard to the quality of the natural product, it will be seen by the following analysis that the Uchta beds will compare favourably with any others.

The samples were analysed at Berlin, at Hamburg, and at the Russian Imperial Technical Society at St. Petersburg.

ANALYSIS BY M. ZITTERCH, DR. OF FACULTY AT BERLIN.

| | |
|--------------------------------|----------------|
| Water at 128° | 4·34 per cent. |
| Light oil at 250° | 1·71 " |
| Heavy oil | 3·11 " |
| Paraffin mass above 250° | 82·41 " |
| Gas and loss | 8·43 " |

Total 100·00 per cent.

ANALYSIS BY PROFESSOR UBT, HAMBURG.

| | |
|-------------------------------|----------------|
| Benzine (0·600-0·750) | 0·07 per cent. |
| Photogene (0·780-0·820) | 4·01 " |
| Heavy oil (0·750-0·900) | 80·03 " |
| Paraffin | 2·04 " |
| Naphtha residue | 13·01 " |
| Cresote | 0·03 " |

Total 100·00 per cent.

The analyses made by M. Rhodoff at the Imperial Technical Society, St. Petersburg, has shown 82 per cent. of heavy oil. M. Ragoine, author of a work on naphtha, states that the Uchta naphtha is of a dark brown colour, with a specific gravity of 0·9, and gives when heated from 62 to 65 per cent. of volatile oil, and contains paraffin.

The analysis made at the laboratory of the Academy of Mines at St. Petersburg shows that the specific gravity of the Uchta naphtha is from 0·912 to 0·914. Heated to a temperature of 300° it gives from 36 to 45 per cent. of inflammable oil, and after being purified with sulphuric acid, petroleum almost without colour and without smell is obtained. The specific gravity of this produce is 0·817.

The analysis of a sample taken from the bore-hole made by the gentleman already referred to was made last year by the successor of the late M. Sideroff, with the following results:—

| | Specific gravity. | |
|---|-------------------|-----------|
| 1. Up to 120° Benzine, Lizarine .. | 0·77 .. | 2·28 p.c. |
| " 180° .. | 0·79 .. | 1·02 " |
| 2. " 300° Light oil .. | 0·815 .. | 38·85 " |
| " 360° .. | 0·820 .. | 1·37 " |
| 3. Above 360° (without therm.) Heavy oil | 0·890 .. | 26·97 " |
| 4. After heated in a platinum retort, paraffin and tar .. | — .. | 4·66 " |
| 5. Cock .. | — .. | 8·00 " |
| 6. Loss by presence of water, gas, and imperfections of machines .. | — .. | 16·85 " |

This analysis shows that more than 40 per cent. of light oil was obtained, and a total, with the lubricating oil and benzine of 70·19 per cent. The writer of the report goes on to say, considering that the loss in these analyses, due to the imperfection of the apparatus, was heavy and in regular manufacture that these would be less, it is pretty easy to see that in heating this naphtha to a temperature of 800° a result would be obtained in reducing the loss proportionately with the oil extracted.

| | |
|-----------------------|-----------------|
| Petroleum | 50·85 per cent. |
| Lubricating oil | 31·49 per cent. |

Total 84·34 per cent. of oil,

taking into consideration the paraffin. But taking a more limited view than that shown in the above figures, and setting it down that no more than 70 per cent. of oil, of which 40 per cent. is petroleum, let us see how it will compare with the Baku naphtha.

The latter with a specific gravity of 0·85 to 0·88 produces only one-third of lighting oil. The former is, therefore, much superior to that of the latter, even when leaving entirely out of consideration the fact that the samples taken for their analyses had been exposed to the air for a considerable time, and would have been considered unworkable at Baku.

(To be continued.)

MEETINGS OF MINING COMPANIES.

VAN RYN ESTATE AND GOLD MINING COMPANY, LIMITED.

The scheme of reconstruction.—A valuable and promising property.

THE third ordinary general meeting of the Van Ryn Estate and Gold Mining Company (Limited) was held on Monday, at Winchester House, the chair being occupied by Mr. T. J. BEWICK. The SECRETARY (Mr. Stuart James Hogg) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, at the outset I have to ask your kind indulgence on several grounds. I am not a public speaker, much less an orator, and beg of you, therefore, to look upon me simply as submitting to you a plain statement of facts. Next, my connection with the company covers only a period of something like eight months, and thus I am unable, from personal knowledge, to go into what may be called the early history of the company, and at this point I beg to express a hope that matters bearing on the past may not be indulged in more than is absolutely necessary. We have met here to-day to look at the present and the future of the undertaking—to discuss the past will not, I fancy, help us in our deliberations. Then the recent unexpected death, which we all deplore, of Mr. Stringer, your late Chairman, has deprived us of his valuable assistance and interfered with the arrangements of the board. At the request of my colleagues I appear before you as their representative on this occasion. I cannot but regret that the choice has not fallen on some one better qualified for the post. In the accounts forwarded to you will be found a full statement to the end of the last financial year. The profit and loss account, I regret to say, shows a debit balance of £3920, as compared with practically £5000 for the year ending December 31, 1892. I may here further mention that in the year 1892 there was a capital expenditure of £50,816, as against £30,280 last year. It is these two last sums, amounting together to over £81,000, which necessitates the proposed reconstruction of the company, which will come under your consideration at the extraordinary general meeting immediately following the conclusion of the business now before us. The monetary returns from the products of the property, although considerable, amounting as they do to over £50,000 in the year 1893, are short of what was anticipated. Other receipts bring up the total of the year's revenue to more than £52,000, and in this credit is not taken for the value of the tailings which have accumulated, nor for the increased value of the trees planted on the company's estate; both these items are assets of moment, the realisation of which will materially add to the future returns. The accounts before you are full and complete, and after careful examination are endorsed by the eminent firm of auditors whose signature is appended thereto. If, however, there are any of the items which you think need explanation I shall be glad to give attention to any inquiries, and the representative of the auditors is present, and will, I feel sure, afford the fullest information, which will, I hope, give satisfaction to those seeking enlightenment. Whilst referring to the papers before you I must explain a trifling printer's error in the table of statistics issued therewith. Under the head "Yield of gold from concentrates" the total should be "227·40" instead of "297·40 ounces." There is a matter calling for explanation, which I approach without further delay, as in the absence of a statement of the circumstances the board might be thought chargeable with a want of frankness towards the shareholders. I refer to the report on the property by Sir John Hayes Hammond, the eminent American mining engineer, now resident at Johannesburg. In November last the board, in the then financial position of the company, felt that it was absolutely necessary to have the advice, as to the value and prospects of the undertaking, of a qualified and independent authority on the spot, and, eventually, Mr. Hayes Hammond was selected to examine and report on the property. Mr. Hammond's report is dated December 14, 1893, and on its receipt here, early in January this year, would have been at once submitted to the shareholders, but it was accompanied by a letter from the company's representative at Johannesburg, stating that, before taking any action based on Mr. Hammond's report, he desired us to await explanations from himself. This led to considerable delay, and then ensued further correspondence on Mr. Hammond's recommendations, and an intimation that that gentleman purposed furnishing us with a supplementary report, based on the developments made and information obtained subsequent to the date of his report. This supplementary report has not been received. Under these circumstances the board has taken upon itself the responsibility of not submitting Mr. Hammond's report to the shareholders, and we hope this course will have your approval. I may say, however, that his recommendations involved an outlay in developments of £15,000, an amount which the board were not in the then financial position of the company prepared to advise the shareholders to expend. Now, as to the future. Up to December 31, 1893, you have the figures before you, and although subsequent returns have been month by month published in the financial newspapers, you may not recollect them. They are practically as follows, viz.:—January, 1894, 859 ounces of gold; profit in South Africa, £96. February, 1894, 847 ounces of gold; profit in South Africa, £455. March, 1894, 1154 ounces of gold; profit in South Africa, £963. April, 1894, 1500 ounces of gold; profit in South Africa, £1225. These figures show a very satisfactory advance, and there are, we think, good grounds for assuming that the proverbial corner is turned in favour of enhanced returns and, let us hope, big profits. In the absence of a report from the mines you probably expect from me some particulars of what has recently been done, and is now being carried on in the mining operations proper. On the receipt of Mr. Hammond's report, the board determined on limiting the underground operations to what are now known as mines Nos. 4, 7, and 8. No. 4 is the principal mine, and it is here that the workings are in the most advanced stage, and the prospects the most encouraging. The new machine rock drilling plant is here established, and is well adapted for the full development and subsequent economical working of the reef at this point, and it may also be found well adapted for the mining and other operations at mine No. 8. The main shaft at mine No. 4 is sunk on the reef which dips to the south at an angle of 65°. At this time it has reached a depth of 415 feet from the surface, and will be continued with the greatest possible expedition. There are levels from this shaft at 110 and 250 feet, and quite recently a third level, at 400 feet, has been started, and is being driven east and west in the reef, and here the outlook is encouraging, both as regards the size of the lode and its value in gold quartz. As this third level is continued, the reef is being opened up ready for stoping to the 250 feet level, a height of 150 feet, thus laying open valuable reserves. Winzes have already been sunk below the second or 250 feet level, in order to accelerate the extraction of the quartz. At mine No. 7 the operations are limited to the stoping of the vein, which is not in its entirety of a character to at present justify further outlay in development, yet a recent discovery of rich ore, to a limited extent, may possibly lead to important results. The shaft at this mine is vertical, and is sunk to a depth of 230 feet, with levels at 105 feet and 220 feet from the surface. No. 8 mine is comparatively undeveloped, yet the result, so far, and indications are such as to justify further expenditure in explorations and machinery, and to this mine we look for satisfactory results—the only drawback is that the outcrop is not far from the southern limits of the company's estate, and hence the life of this portion of the property cannot be looked upon as of extended duration. There are other points on the vast area held by the company which may by-and-by be found to contain reefs justifying the cost of exploration with what result it is at present impossible to even estimate. As regards the

50 stamp mill, and machinery in connection therewith, and the winding, pumping and other mechanical appliances, as well as the various houses and erections, are stated by the company's representatives on the ground as efficient and in good repair. It is quite clear to your directors that the actual cost of the machine rock-drilling plant has very far exceeded the estimated cost, and to some not inconsiderable extent is responsible for the present financial position of the company. This plant appears to be in excess of the company's present requirements. In the end this may not, however, be a disadvantage; but in the case of a concern hampered by want of capital, it is, to say the least, injudicious to have entered upon such an expenditure. There are, I fear you will think, many other points which I ought to mention; but where there are so many matters to comment upon, you will, I trust, excuse my omissions; at the same time I ask you to draw my attention to any point that has, in your opinion, been overlooked, and I will do my best to make up for my shortcomings. The Chairman concluded by moving the adoption of the report and accounts.

Mr. VAN RYN seconded the resolution. Against the loss of £3920 shown in the balance sheet they had to set the value of 50,000 tons of tailings which had been raised. For these they had been offered 2s. 9d. a ton; but they had decided to treat them themselves, and hoped to realise 4s. a ton upon them. The profits upon the last month had amounted to £1225, and it might safely be taken that the profits would increase, seeing that the rock drilling plant was now at work supplying the mill. There was no doubt as to the value of the mine, and his predictions at the last meeting as to the increase in the profits had been fully realised. The mine No. 7 had not been paying only 5 dwts. to the ton. About six weeks ago, however, they struck a rich leader, worth in some places 19 ounces to the ton. To ascertain whether it would continue they would have to drive east and west, but, as in the neighbouring mines it had continued, there was strong reason to hope that it would not stop in their own case. A rich chate had been opened in mine No. 8, and, as it was 400 feet from the boundary, there was every reason to hope that it would yield a large quantity of ore. He seconded the resolution with the greatest pleasure, believing thoroughly in the success of the mine.

Mr. TAPP said he had always had an idea the company was very badly managed, and, consequently, before the resolutions of reconstruction were put, he wished to know whether it was not contemplated to make a change in the management. Unless that were done, he should not have much confidence in the future of the concern.

Mr. VAN RYN explained that he had only taken a seat upon the board because he was not satisfied with the management of the company, and desired to protect the very large interest he had in the concern. There was no doubt that reconstruction was the only course open to the shareholders, and after it was completed they would be able to make what changes they desired in the management. In another six months they would require a further 50 stamps for milling.

The CHAIRMAN said that the question of effecting some changes in the management had been before them, though it was impossible to say at present what would be done in the matter.

The resolution for the adoption of the report and accounts was then put and carried unanimously, and the proceedings terminated.

An extraordinary general meeting of the company was subsequently held for the purpose of considering the following resolutions for the reconstruction of the company:—

1. That it is desirable to reconstruct the company, and accordingly that the company be wound up voluntarily, and that Mr. Stuart James Hogg be and is hereby appointed liquidator for the purpose of such winding up.
2. That the scheme of reconstruction referred to in the report and circular letter issued by the board on the 17th May, 1894, be approved, and without limiting the general powers and authorities of the liquidator, that he be authorised, pursuant to Section 161 of the Companies Act, 1862, to adopt and carry the same into effect in such manner or with such modifications as he may be advised.
3. That the liquidator be also authorised pursuant to such section, to receive in compensation or part compensation for the transfer of the property and assets of this company to the new company, to be formed to acquire the same under the proposed scheme, shares or other like interest in, or other benefits from the said new company for distribution among the members of this company.
4. That the provisional agreement between the company of the one part and the South African Trust and Finance Company (Limited) of the other part, dated the 16th May, 1894, for securing the subscription of a portion of the capital of the new company, be ratified and confirmed.

The CHAIRMAN said:—Having already occupied much of your valuable time, I will not now detain you for more than a few minutes to explain certain points bearing upon the business of this meeting. You have learnt from the printed statements placed in your hands, and through me to-day, what your directors have to say on the past operations and the present position of the company, and I will not, therefore, recapitulate my previous remarks, yet there are some matters on which I beg to be allowed to comment. Now, gentlemen, it is not a very pleasant position to be in to tell you that all your capital has been expended, and that you are £41,000 in debt. Such, however, is the fact. Yet I hope to convince you that for this outlay you have a valuable property which, after the great expenditure upon it, is likely with a little further outlay to be of ample value for all that has been spent upon it. Fortunately it is not, as is now too often the case in mining undertakings, that, owing to diminution of the value of the products, we have to fall back for an explanation of our position. No; gold, practically our only output, maintains its value, and is likely to continue to do so. So far as I can gather, the history of this undertaking is of common occurrence in mining ventures. The mining operations have been continually behind the milling capacity, and hence the concern has always been in a "hand-to-mouth" condition, a most undesirable state of affairs in any commercial enterprise. The object of the present proposed reconstruction is to obviate this, and assuming the scheme submitted for your consideration is approved, it will be the aim of the new board of directors to carry out the business of the company with the view of increasing the output and reducing the costs to the utmost limits, consistent with efficiency and safety, and to secure to the shareholders an adequate return for the investment of their capital. An important feature in providing the additional capital of the proposed new company is that it is forthcoming at par, without any underwriting or commission charges. The guarantors join you on equal terms, and rely solely upon the augmented value of the property by reason of further developments and efficient and economical management, and the returns to be obtained therefrom to reimburse them for the risk of their money, and in this you participate with them in the enhanced value of your property. After the allotment of the first £50,000 of the proposed capital *pro rata* amongst the present shareholders, the next £55,000, of which the existing proprietors have the option of taking up £50,000 at par, will discharge all the debts and liabilities of the company and leave about £15,000 for present working capital, whilst £55,000 is in reserve for further mining developments, new improved stamp mill, and other plant, that may be deemed desirable to effect the future enhanced commercial value of the concern as a dividend-paying property. It is estimated that there are 40,000 tons of tailings on the ground, containing an appreciable value in gold, which can be extracted by the cyanide process at a cost which would yield a considerable profit to the company, and a contract has been entered into on a basis, justifying sanguine expectations of a satisfactory result, but until we have something more definite I purposely refrain from entering into figures; yet, at the same time, the board have every reason to believe that there is a large financial reserve in these tailings. In mining undertakings of this character I do not think it desirable to attempt a definite prophecy, yet, after careful consideration, with efficient and economical management, I do not hesitate to predict a financial successful future for the company under the proposal now submitted to you. I now beg to propose the resolutions.

The resolutions were formally seconded, put, and carried unanimously, the proceedings terminating with a hearty vote of thanks to the Chairman.

THE WAIHI GOLD MINING COMPANY, LIMITED.

A highly successful outlook.—The change of plant.

The ordinary general meeting of the shareholders of the Waihi Gold Mining Company (Limited) was held on Thursday, at Cannon-street Hotel, the chair being occupied by Mr. THOMAS RUSSELL, The SECRETARY (Mr. Charles Akers) read the notice convening the meeting.

The CHAIRMAN said: The practice we have adopted of sending to you by circular the latest and fullest information that we receive from the mine is, I feel sure, fully appreciated by you, but it leaves a little that is new to tell you at the annual meeting, for you know beforehand everything that has occurred. Nevertheless, there are some points which, perhaps, I can make of immediate interest to you, and in asking you to adopt the report and balance sheet, I shall endeavour to show you the bearing which the information circulated has upon the present position and future prospects of your property; and I am particularly fortunate upon this occasion, as we yesterday received some more telegraphic information from the mine. I can give you to-day the latest news, and I am glad to be able to tell you it is highly satisfactory. This year, for the first time, we present you with accounts in a new and detailed form. Hitherto you have had a general balance sheet and no profit and loss account, now you have a detailed revenue account in addition to the ordinary balance sheet, and I think you will agree with me that the accounts presented are very clear and full, and leave little to be desired in the way of further information. These accounts show the cost of working the mine and managing the company. You will observe that during the 12 months we have treated about 20,000 tons of stone, and for the purpose of dealing with this question we will call it 20,000 tons. You will note on the other side that the cost of mining and milling, Government rents, gold duty, freight, &c., and of the management of the company in London and New Zealand, amounted to a total of £32,000 (for the purpose of this calculation I leave out the odd hundreds). But to arrive at a true estimate of the actual cost of production we must deduct from this £32,000 nearly £4,000 for items which, though charged against the year's revenue, really ought to be spread over several years, for the money has been spent in plant and opening up ore reserves for years to come. The items I refer to are:—Plant, buildings, and machinery, £521 15s. 9d.; cyanide plant, £921 15s. 1d.; Martha shaft, £1650 11s. 7d.; total, £3094 2s. 5d. There is also a special item of £500 paid to the local board for past services, which cannot occur again. After deducting these items there remains a sum of £28,000, but I add to it £2,000 for contingencies, and arrive at a cost of £30,000, or 30s. per ton upon the 20,000 tons of ore treated. This 30s. per ton means about 7 dwts. of gold with the silver that we produce, so that the product beyond 7 dwts. of gold was profit. Now, gentlemen, for the period covered by this report and accounts—in other words, for the whole of last year—the output was treated by pan amalgamation, and by this pan amalgamation the usual percentage of saving is from 60 to 63 per cent. The difference—37 to 40 per cent., a very large sum indeed—is lost to us, except in so far as we may recover a portion of it by the sale of the tailings or by treatment of the tailings. This pan amalgamation was a great improvement upon the old process of wet crushing, whereby only about 25 per cent. of the gold was saved, but the pan treatment was subject to many drawbacks—1. The pans required a large part of our limited motive power to drive them; 2. Pan amalgamation required that the ore should be ground very fine, and as we could not prepare more than 20,000 tons per annum, our output and profit was, therefore, accordingly limited. This pan treatment has continued up to the present time, and I have dwelt upon it to show you what we have accomplished under its attendant disadvantages, but we have now entered upon a new era—viz., the treatment of the whole output of ore by the cyanide process, from which we hope for very much better results in several ways, as I shall show you presently. The vital question, however, is as to the quantity of ore in sight and known to be available for the mill, for it will be quite useless to have the most approved process for saving gold, if there is no gold to save, or if the ore supply is of limited quantity. And with a view to give you some idea of the ore reserves in sight in the Martha Mine, I have had prepared a diagram, which shows at a glance the ore that has been taken out, what remains and is known to be good, and what remains untouched. Some few months ago we asked the mine manager to give us an estimate of the quantity of payable ore in sight above the adit level—the adit level is the level driven from the surface at the lowest point we could get—and the manager in his reply has roughly estimated the quantity at 67,000 tons within the limits of the several blocks marked A, B, C, D, and E, upon the plan before you. The mining engineer, Mr. Spratt, has added a note that the blocks referred to by the mine manager are exclusive of the contents of the lode, which is known to extend from cuttings 1 and 2 to the western boundary of the mine, and this part of the lode is practically untouched. Whatever may be the prospects of this excluded portion there is no doubt about the large tonnage of ore unexplored in this section. This section referred to by Mr. Spratt covers a distance of upwards of 1000 feet upon the lode, and the mine manager's estimate is also exclusive of the contents of the lode eastward from the present workings, a very considerable distance, over 1000 feet. Gentlemen, you will thus see that above the adit level there is practically a supply for several years to come, but during the last two years' working we have found that the quality of the great lode improved as we worked downward from the surface, and last year, when I was in New Zealand, we determined to sink a main shaft in the most approved position to form part of our ultimate permanent works, and ascertain the quality of the lode below the water level. There was some anxiety to determine this question, for in the history of many New Zealand mines a change for the worse had taken place at the water level. The shaft had been successfully sunk for upwards of 150 feet below the water line, and a level has been driven at 70 feet below the adit level. In this level we have discovered a new reef, which, with your permission, we will henceforth call the Welcome reef. This reef has been driven upon up to date for 112 feet, yielding us first-class ore for the whole distance, thus placing at our command a new and valuable body of high grade ore. This is the lode referred to in the report as intact to the surface, and this lode alone, from the point of discovery upwards, must yield a supply of ore for several years; but the authorities at the mine have pushed on the level or cross cut through this Welcome lode, and at 50 feet beyond it they cut the Martha main lode itself, exactly in the position in which the surveyor indicated it would be found. Well, gentlemen, this main reef has been cut through. It is 28 feet in width, and payable throughout, but 12 feet of it in width is first-class ore. Now, if you add to the store of ore reserves in sight, before referred to, the stone, which must be found in this main lode of enormous size, it is difficult indeed to say how many years' reserves of ore we have before us, and this without any additional expenditure upon dead work. The great and important fact is also now established, that below the water level all the ore we have found is of good quality, and the country rock around is such as is found in connection with payable stone—that, in fact, the whole of the ore body in the new level is better than in the level immediately above. Now, gentlemen, I think you will agree that we have clearly shown you that the company has very large and valuable ore reserves in sight above the new 70 feet level, sufficient for years to come. There remains below that level the whole mine unexplored and untouched. In Victoria, good properties of this description are being worked cheaply and without difficulty, at a depth of upwards of 2000 feet. I will not speculate upon what may be the results by and by of exploring these lower levels. We need not touch them for years to come, but having some knowledge of such undertakings I feel assured the lower levels will be found as good, if not better, than those immediately above—the past history of the mine and our experience of it support this view. And this brings me to another point in connection with these questions. Having these reserves of ore in sight, the problem before us is how to make them

available, and to turn the ore into money, if possible, more rapidly than in the past, and this compels me again to remind you that our crushing power is limited. At very great expense we have brought in all the water we can collect in the district; our races extend over 20 miles; indeed, no more water is to be obtained from the high levels. Moreover, for some part of the summer, when our water races are not full, we have had to use auxiliary steam power to keep the 60 head of stamps going. Of course, we could get additional power by using steam, but there is no coal in the district. Wood is expensive and is otherwise objectionable. The addition of new steam power for crushing is not to be considered under existing circumstances. The use of the cyanide process for the treatment of our ore will come to our assistance; it does not require any power whatever. The solution percolates through the ore in vats, and by using this process we are able to dispense with the large motive power which was required to drive the pans. This power will now be available for extending our crushing plant, and the subject of this extension is under consideration and will be dealt with immediately; if we decide to increase the crushing plant it will only be increased to the capacity of our water power. We shall not attempt the use of steam power except as an auxiliary for part of the summer, as we have heretofore done. It is thought we may be able to add an additional 20 or 30, or perhaps 40, head of stamps to the present battery. Now, if we do so, it will not be a costly undertaking, and will give us a large additional output of crushed ore to deal with, but whether we do so or not the use of the cyanide process will enable us to treat a larger quantity of ore than we have hitherto treated. Heretofore we have had to crush the ore very fine for pan amalgamation. It has had to pass through a screen with 3600 holes to the square inch, but for the cyanide process we shall only require to pass it through a mesh with 1600 holes to the square inch, and the calculation is that the present plant can deal with 2000 tons a month, which is the supposed capacity of the cyanide plant, so that without any addition to the cyanide plant, instead of the product from about 1650 tons per month, we shall have the product from 2000 tons per month, and instead of a yield of 62 or 63 per cent., we shall have a yield of 90 per cent., and, perhaps, more than that, but if we increase our crushing plant the output will, of course, be proportionately increased. Of course, gentlemen, against these advantages we shall have to set the payment of the royalty, and the slightly extra cost of the cyanide treatment over the pan amalgamation. We shall also at first not reap the full advantage of the new process, because the new vats absorb a large quantity of the solution containing the gold, and until the vats are saturated with the solution we shall not get the full result, which after a few months we shall attain. Now, gentlemen, I have set before you facts from which you may draw your own conclusions, upon which you can make your own calculations, or, failing calculations, you can form your own rough estimate as to what is before you in the immediate future. I have not attempted to calculate what our increased returns may be from the developments now in hand. Some will take a more or less sanguine view. I, personally, hope for large and better results; but one thing is clear, and I think you may rest assured of it, that your present dividends will be maintained. The Chairman, in conclusion, read the following cable from the mine:—"The new lode has been driven upon for 112 feet; its average width is 7 feet, and is first class ore throughout for the whole of the distance driven on. This will place at our command a valuable body of high grade ore. The main lode has been cut through, and is 28 feet in width; for 12 feet it yields first class ore. We are sinking winze No. 1 on the main lode from adit level to meet new level, all through good ore; it is now 45 feet deep; for the last 2 feet it assays 2 ounces per ton. The whole of the ore body in the new level is better than in the level immediately above. The resident manager's report of the present position and future prospects first class."

Mr. H. J. BRISTOW seconded the motion.

Mr. SETON enquired whether the success of the cyanide process had been placed positively beyond doubt. He complimented the board and their staff upon the excellent results which had followed upon their working.

Mr. ROTHWELL also expressed his appreciation of the able statement of the company's affairs they had received from the chair.

The CHAIRMAN, in reply, said the cyanide process had been abundantly tested before its adoption, so that there was no risk in the matter at all.

The motion for the adoption of the report was then put and carried unanimously.

Mr. J. Boustead, the retiring director, and the auditors having been re-elected, the proceedings terminated with a hearty vote of thanks to the Chairman.

SOUTH AFRICAN GOLD TRUST AND AGENCY COMPANY, LIMITED.

Reconstruction confirmed.

An extraordinary general meeting of the above-named company was held at Cannon-street Hotel, on Monday, for the purpose of confirming the resolutions passed at the extraordinary general meeting held on the 7th inst., for the reconstruction of the company.—Mr. H. E. M. DAVIES (the Chairman) presided, and formally moved that the resolutions be confirmed.

Mr. W. M. FARMER seconded the motion, which was carried with but two dissentients.

The CHAIRMAN said before the meeting separated he would like to refer to a matter in respect to which the directors had been somewhat criticised. It had become public property that they were negotiating with a view to absorbing the assets of the Mines Trust, but, obviously, the directors had not been able to communicate on the subject with the shareholders until there was something definite to go on, in the first place, and, secondly, it would not have been fair to the directors of the Mines Trust to announce what was going to be done with their assets until the Mines Trust directors had had an opportunity themselves of communicating with their shareholders. The report of the Mines Trust was, however, now out, and, therefore, there was no longer occasion for secrecy. The directors proposed to take over the Mines Trust. The assets would be taken without any sentimental valuations, but purely on business principles. Two independent directors on the Mines Trust—Lord Gifford and Mr. Harris—had gone through this company's assets and valued them, and, on the other hand, Mr. Nixon and Mr. Hamilton had valued the assets of the Mines Trust, and the amalgamation had been based purely on the relative values of the two companies, without any question of goodwill. The arrangement was fair and equitable to both companies. The advantage to this company was that, without increasing the expenditure, they would add considerably to the income. The gross profits of the Mines Trust had been about £6000 a year, but, having only a small capital, that had been swallowed up in expenses. Allowing £1000 for extra expenses, the new acquisition would represent about 2 per cent. on the nominal capital of the new company. The advantage to the Mines Trust would be that they would save the present heavy administration expenses. They paid up capital of the Mines Trust was about £85,000, in addition to which they had a reserve fund of £3000, and a balance to the credit of profit and loss account of about £4000, making altogether £92,000, a sum providing for liabilities. Mr. Davies then read the statement of the directors of the Mines Trust regarding the value of the assets, which came out on the face of the balance sheet at £92,000. The directors of the African Gold Trust, however, had reduced this sum on their own valuations, and what they acquired were assets of the book value of £82,000, for which they would pay £42,637 of their own shares. The valuation of the Mines Trust directors of this company's assets showed a great discrepancy when contrasted with the market prices of them, as, according to what they stated, the shares of the new company were intrinsically worth 35s. each.—The proceedings then terminated.

NERBUDDA COAL AND IRON COMPANY, LIMITED.

The competition from the Government.—The new seams.

The thirty-fourth ordinary general meeting of the Nerbudda Coal and Iron Company (Limited) was held on Tuesday, at the offices of the company, in Gresham House, the chair being occupied by Mr. S. J. WILDE.

The SECRETARY (Mr. F. R. Bluet) read the notice convening the meeting.

The CHAIRMAN said:—Gentlemen, there are only two points bearing on the report that need be mentioned. One is about the new field, which is going on very satisfactorily indeed. A certain amount of boring has been carried out with satisfactory results. We have sunk one shaft down 62 feet to the first seam of coal, and they are beginning to drive a level upon it. As soon as we are able to get a sufficient quantity of coal out, we shall send 400 or 500 tons to the two railways—the Bombay and Baroda and the Great Indian Peninsula—for them to test its quality. Of course, the borings have gone much deeper than the one seam, and we know for certain there are others below, down to which we shall in due time get. So far as we have been able ourselves to test the coal and judge of its merits, we believe the new to be superior to the old, and think it to be quite equal to the Umaria coal, said by some to be superior to it. One especial advantage we have over the Umaria coal, which is that it does not clinker so much. I cannot say positively whether that is the case, but I believe it to be so. The Umaria coal, you all know, is worked by the Government, and they used to charge a certain price for it, which two years ago left them the enormous profit of 2 per cent., after allowing 2 per cent. for the sinking fund on the money laid out, a sum which can hardly be called a fair commercial profit even in these days. We hold that if the Government choose to work this Umaria Colliery at a loss—for that practically is a loss, seeing they get no fair return on the money—they ought certainly to buy us out. It really is not right for the Government to compete with private enterprise. Bearing upon this, we wrote a letter on December 13th to the Under-Secretary of State for India, which I will now proceed to read to you:—"To the Secretary of State for India, India Office, Whitehall.—I am instructed by the board of directors of the Nerbudda Coal and Iron Company (Limited) to bring to your notice, and ask for your favourable consideration of, the position in which that company is now placed by reason of the action of the Indian Government, involving nothing less than the impending ruin of the company. You are no doubt aware that the Nerbudda Company has opened up, and from 1862 to the present time worked, a coal field at Mohpani, in the Central Provinces of India, the main consumer of their coal being the G. I. P. Railway Company. The undertaking has proved a most disastrous investment to the shareholders, who, for the first 12 years of the company's existence, received no return for their capital outlay." If you are sufficiently old shareholders you will remember the fact that when our company started the G. I. P. Railway was expected to reach Jubbleparah in two years' time, instead of which, however, it did not reach there for 10 years. Every year they have always said they would be there in two years, and had we known the extension would not have been opened for 10 years we should have shut up our mines and done nothing until the railway was opened. "Small dividends only were declared at intervals between 1874 and 1889, but since that year none have been paid. You will see, therefore, that during the 30 years of the company's existence there has been a very poor return, and as a result, the shares of the company (£3 subscribed, with £2 11s. paid up), have fallen in value to such an extent that they have recently been sold as low as 3s. 6d. per share. A few years since the Indian Government opened out collieries at Umaria, on the Bengal-Nagpur Railway, which have been worked, and the coal supplied in competition with that of the Nerbudda Company. In the year 1891-2 the coal of the Umaria Collieries, which had previously been sold at a higher price, was reduced to Rs. 5 8s. per ton, and in August of this year was further reduced to Rs. 4 3s. per ton. About the same time (viz., in July, 1893), the Government induced the Bengal-Nagpur Railway to lower its rate for carriage from 9 pies per ton per mile to 408 per ton per mile, equal on the whole distance traversed from Umaria to the G. I. P. Railway to about an additional rupee per ton reduction in freight. This, with the Rs. 1 5s. and reduction in cost of coal, equals Rs. 2 5s. per ton reduction in the total cost of Umaria coal to the G. I. P. Company. When the Umaria coal was being sold by the Government at Rs. 5 8s. per ton, with the then rate of carriage, the Nerbudda Company (which is situated on a colliery branch of the G. I. P. line) were receiving Rs. 8 6s. per ton, which, on their greater cost and comparatively small production, barely enabled them to continue working; in fact, but for the discovery of a more extended coal field immediately adjoining their present workings, it is not impossible that the Nerbudda Company might have been wound up with a loss to the shareholders of nearly the whole of their capital. By the published accounts it appears that when the Umaria coal was sold by the Government at Rs. 5 8s. per ton, the colliery only produced a return of 0.49 per cent. upon the capital employed in working it, a result which is practically equivalent to working the mines at cost price. Since the reduction of the price to Rs. 4 3s. per ton it is more than probable that even with an increased output (which of itself would have the effect of reducing the market value of coal), the Umaria coal must have been sold below cost price, and a loss sustained which would fall on the revenues of India. The result of this enormous reduction of Umaria coal has been that at the present time the G.I.P. Company have intimated to the Nerbudda Company that, instead of taking 24,000 tons next year at Rs. 8 6s., they must decline to take more than 12,000 tons, and that at only Rs. 6 per ton, a quantity and price which will not cover working expenses. This decision is disastrous, and means ruin to the Nerbudda Company, and as my directors understand that the Government policy which has led to it has been adopted under instructions received from the Home Government, they desire to point out that a continuance of that policy will not only involve the destruction and winding up of the Nerbudda Company, but will also, undoubtedly, tend to stop the development of the mineral resources of India, as English capitalists will be deterred from investing capital in a dependency where it is liable to be lost, as a result of a ruinous competition carried on by the Government itself. I may here likewise point out the effect of this policy upon the development of the new coal field adjoining the present Mohpani workings, in which the Nerbudda Company have, at considerable expense to themselves, discovered and proved the existence of valuable strata of coal previously overlooked by the Government experts." For many years both our own people and the Government geologists all declared there were no coal seams at all in that part. Two or three years ago they changed their mind, and we got permission to bore for coal, some very good seams of which we found. "My directors have contemplated asking their shareholders for capital to sink the necessary pits and open this field, but if the present action of the Government is continued, and the price of coal thereby forced down to such an extent as to leave no margin of profit, my directors cannot suppose that the shareholders will provide the necessary capital. My company must, of course, accept any fair competition, but if it is the policy of the Government to work the mineral resources of India themselves, without earning any profit or even at a loss, my directors respectfully submit that it would be but equitable that the undertakings of private capitalists should be acquired by the Government at such a price as, having regard to all the circumstances would be fair and just, as no private company can compete with Government on such terms. If, on the other hand, the Government do not wish to extinguish private undertakings, but desire to give fair and reasonable encouragement to the investment of British capital in India, the directors submit that Umaria coal should be sold only at a fair market price, and they trust that having regard to the present position of matters the Government will bring their influence to bear upon the G.I.P. Railway Company to induce them to increase their contract with the Nerbudda Company to such an amount and price

as will avert the otherwise imminent ruin of that company." Then comes a simple acknowledgment from the Government of the receipt of our communication, after which there is the important letter:—"India Office, Whitehall, S.W., 8th May, 1894.—Sir: With reference to Mr. Russell's letter of the 10th January last, I am directed to inform you that the Secretary of State for India has now received from the Government of India an expression of their views on the representations made in your letter of the 13th December last, regarding the competition to which the Nerbudda Coal and Iron Company had been subjected by the lowering of the price for steam coal at the Government colliery at Umaria. The Government of India explain that the output from the Umaria Colliery was in excess of the demand at the prices formerly prevailing, and the reduction in the price of steam coal was determined upon in the expectation, which appears to the Secretary of State to be well founded, that the increased sales resulting from the lowering of the price, together with greater economy in working, would enable the colliery to yield an increased net return sufficient to cover the charges for interest on the capital invested in the mines. In following this policy the Government of India have acted entirely in accordance with the views of the Secretary of State, and Mr. Fowler is unable to see any reason for interference with the action of that Government on the ground of unfair competition with private companies. The directors of the Nerbudda Company ask that, having regard to the present position of matters, the influence of Government may be exerted to induce the G. I. P. Railway Company to increase their contract with the Nerbudda Company to such an amount and price as will avert the otherwise imminent ruin of that company. In reply to this request I am to state that the Government are unable to press the G. I. P. Railway Company to increase either the amount or the price of the coal supplied to them from the Mohpani Mines. It is understood that the Government of India have already communicated, through the Chief Commissioner of the Central Provinces, to your company their views as to the extent to which they are prepared to go in this matter.—I am, Sir, your obedient servant, REAY.—The Secretary, Nerbudda Coal and Iron Company (Limited)." We don't mean to let the matter rest there. We shall get some Members of Parliament to ask the Government some questions about it. Obviously, it is unfair for the Government to compete with private enterprise except upon fair competitive terms. Fair competition we do not mind; we can hold our own against it. The Government first of all reduced the price of coal to the Indian Midland. To this nobody has raised any objection. The Indian Midland does not earn its guaranteed dividend, and if, instead of paying so much into their pocket for the difference between the dividend earned and the guaranteed dividend, they like to sell the coal at a lower price, it does not affect the revenues at all. But the G.I.P. have said:—"If you supply the coal to the Indian Midland at lower terms, it is not fair of you not to supply it to us in the same way." To this representation the Government have yielded. To us, however, the cases seem to be very different. The Chairman concluded by moving the adoption of the report and accounts.

Mr. MANNING seconded the resolution, which was carried unanimously.

The retiring directors, Mr. S. J. Wilde and Mr. W. O. Robinson, having been unanimously re-elected, the meeting terminated with a hearty vote of thanks to the Chairman and directors.

DEVON GREAT CONSOLS COMPANY, LIMITED.

An able and exhaustive speech from the chair.—
Bright prospects in the future.—A splendid record for the year.

The ordinary general half-yearly meeting of the Devon Great Consols Company (Limited), was held on Wednesday, at Winchester House, the chair being occupied by Mr. PETER WATSON, C.O. (Chairman and managing director).

The SECRETARY (Mr. George Hadlee) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, before addressing you to-day, I have to thank those shareholders who are unable to attend this meeting, and who have sent their proxies to the directors, thus showing a confidence in the management, which my colleagues and I appreciate fully. The number of proxies is larger than that lodged at any period in the history of the Devon Great Consols Company during the past 50 years. (Hear, hear.) You will, I presume, in accordance with the usual custom, take the report of the directors and statement of accounts as read. Well, gentlemen, I, as your managing director, my colleagues, and the local managers who are here, have great pleasure in meeting you to-day, to give an account—as the phrase goes—of our stewardship for the past twelve months. In doing so, I would at the outset call your attention to the fact that we have sold during the past year copper ores and arsenic to the value of £28,951, while our costs have been about the same as were incurred during the previous twelve months. It will be remembered that about a year ago we had to provide nearly £400 for land damage, which was paid to the Duke of Bedford on our obtaining the new leases. That we have paid over, and, in addition, we have charged to the same account the sum of £200 for legal expenses, and you will see the balance of this expenditure charged in the accounts. Also we show a credit balance of £2662 5s. 10d., which we brought forward from the last account to the profit and loss account. Perhaps I might refer to that account first, more particularly as it concerns the past year, though it certainly is so explicit as hardly to require any elucidation. On referring to it you will find that against the sum already mentioned, £2662 5s. 10d., as having been brought into the account on the last occasion, and the amount realised upon arsenic, we have paid two dividends of 3s. per share during the last twelve months and, notwithstanding that, we leave off with a credit balance of £4205 10s. 6d., which is equal in round numbers to another 8s. per share. (Hear, hear.) With regard to the other items I have nothing particular to say, but if any shareholder wish to ask some questions I shall be very pleased to answer them. The half-yearly account, as you will see, shows a cash balance of £2804—or rather £2363 3s. 7d., the difference being upon the copper ores sold since and the money we have received. Next I will come to the balance sheet. Year after year for a number of years, as you will remember, we thought it proper to write off a certain amount against depreciation of mine plant, machinery, and steam engines, which at one time we valued at £70,780. We greatly reduced that amount until something like a year ago, when I told you we decided that the account should stand where it was at £20,763 10s. We now intend to continue that policy, for we believe that if the whole of the machinery and plant were to be sold as old iron it would realise £20,000, if not more, which would be equal to £2 a share. As to our reduction plant and machinery, which many years ago was valued, I think, at something like £7000, we had also reduced that to £1470. We have added to the works during the year £1000, and we take credit for that, as I will mention presently, but there also we have written off £247. The Hagon Honey Tor House, which was valued some time ago at £1400, has been greatly reduced, and has been left at £850, which is a very good investment. The lease of it has about 42 years to run, and Mr. Bawden, our worthy purser, since he went to live there has paid £50 a year. This arrangement has not only given us 6 per cent. for the money, but is worth much more to the company, because we now have Mr. Bawden resident on the mine, which is a great deal better than if he lived from four to five miles away. The rest of the items explain themselves, and after the payment of two dividends there is a balance carried forward of £4205. The figures are so explicit that I need say nothing more in explanation of them. Indeed, as to the accounts, I can challenge any shareholder, or, in fact, any one in the City of London, to say where the accounts are as fully and as closely kept as our own. Every known liability up to the 30th of April is included, and here we are met on May 30th to discuss these accounts, which are the accounts of one of the largest,

if not the largest, mining and manufacturing company in this country. A great amount of time and attention—both at the mine and in London—is required to keep these figures so closely up to date. Now, gentlemen, I will go on to Captain Cleme's report. He says:—"Since the general meeting in November last a number of our work people have been laid up from influenza, nearly 40 at one time being absent from their work, and some of the agents also have been suffering from the same cause." I am very sorry to tell you that the influenza has been most seriously prevalent throughout both Devon and Cornwall, not only in the towns, but also in the villages, and has occasioned a great number of deaths. A great many of our men were down with the disease, and you must bear that fact in mind when you are considering our financial statement. Had it not been for the influenza, we should have had a much more satisfactory account to show you, satisfactory as it still is to the directors, and, as we hope it will be, to every individual shareholder. (Hear, hear.) I have deeply to regret that our worthy Captain Cleme, who is present here to-day, who has been at the mine for nearly 50 years, and who made some of the grand discoveries in connection with it in the early days, has been down with influenza for some months, and we have been very anxious about him. Notwithstanding that, however, as you can see, he is now looking almost the picture of health. We intend to do everything we can to make him comfortable for the rest of his days. (Hear, hear.) We feel—and I speak from a knowledge dating long before I had any connection with the Devon Consols—that there is no man in the two counties of Devon and Cornwall who has had so vast an experience of mining as Captain Cleme, and none that stands higher in the estimation of his fellow-workmen. (Hear, hear.) He is now fast recovering, and we hope that with a few days' rest he will regain his usual state of health, in which you have seen him at previous meetings. You know what a serious thing influenza has been. We, and many of our families, have suffered from it, and know what is the effect it leaves behind. But I have not told you all. We were just as anxious about our worthy purser, Mr. Bawden, who was, I assure you, dangerously ill with that unfortunate epidemic. He, also, has got over it, and I never saw him look better than yesterday and to-day. I hope he will continue in as good health. We must heartily sympathise with those poor fellows, our miners, who have, many of them, been at the mine for a large number of years. (Hear, hear.) I must now refer to the £1000 I mentioned just now. During the six months the refiners' furnaces have been rebuilt with several of the roasting furnaces, and the reduction works generally have undergone considerable repair. Let me tell you that we might have gone on longer and have given you larger dividends instead of outlaying the money as we have done. We thought, however, that now, when we have the new lease, would be the time to put our house in order, and to look to the future of our furnaces, and so enable us to do as well or even better in the future than we are doing now. (Applause.) Then, in the report you will find that our reserves, notwithstanding the enormous quantity we have taken out of the mine, have increased and that our prospects are "very cheering." That is the phrase of Captain Cleme. In other words we have increased our reserves to something like 800 tons more than we had 12 months ago. That you will agree is very satisfactory. Now we come to the report of our engineer who has charge of all our engines and water wheels. Some of you have been down to the mines, and know what an extent they cover. The other day I was asked the meaning of the name "Devon Great Consols." The word "consols" simply means that a number of mines were consolidated into one big concern at that time, and if those shareholders who have not been down to the mine yet care to go down this summer, as I hope many of you will, they can see for themselves the enormous extent of the property and its machinery. If they care to go underground, well and good, but I would advise them not to do so, because they might have to travel something like 45 miles of levels, and I think they would be rather tired when they came up, besides being but little wiser than before. Coming to the engineer's report, you will see that he says:—"No. 2 boiler has just had some repairs. The 30-inch winding engine, No. 1 boiler has been repaired but not put in work since, but the two boilers and engine are now in good condition, as well as the man engine." Then you will see that in the south lode the boiler "has been put into work, after a thorough repair, and the tube hoops to meet the Board of Trade requirements, and is now, with the engine, in good working order." "In the arsenic works the mill engine is in good working order; the boiler, after examination, is to be removed; an 8 ton boiler and fittings have been purchased to replace it, and preparations are being made to do this without delaying the grinding. The calciners and attachments are working well." Then he says that the railroad and rolling stock are in fair condition. We have 5 miles of railway and two locomotives to keep in good repair. You have all, no doubt, read this report, and, therefore, it is unnecessary for me to detain you by reading it. I only hope that shareholders will take an interest in the reports and read them thoroughly, for we desire, as we always have done, to place everything before the shareholders. A shareholder spoke to me the other day about the price we have to pay for coal. Just after we met last year we made an excellent contract for coal at 12s. a ton. As we consume some thousands of tons during the year, you will see that we have saved a good sum upon the contract. Had we been obliged to pay the ordinary price some five or six months ago we should have had to pay a little more, as, perhaps, some of you know from experience at home. In fact, the price at that time was up to 20s. and 21s. a ton. Therefore, I think the directors may fairly take credit for having saved you 6s. or 8s. a ton in other words, £800 or £1000 upon the whole period, which means credit to about 1s. 6d. or 2s. a share. (Applause.) You will, I think, credit us with having done our duty, and with having acted wisely in this matter. (Hear, hear.) There are many other things I should like to call your attention to. There is the price of copper; 12 months ago I told you I could not see my way to hoping for a better price for copper. That forecast has, unfortunately, been borne out by the facts, for copper has gone down during the last 12 months something like £5 or £6 a ton, and that fact really means to us something like another 1s. a share. When I stated that opinion it was £45, and now it is £39, as you will see by the papers. That fall affects us to the extent of 1s. 6d. a ton on our profits. You will ask—"What do you think of copper now?" Well, my opinion is that it ought to be £10 a ton higher than it is at present. I am not, however, going to predict that it will reach that figure during the ensuing 12 months. All depends on the American tariff question, on the output from various sources and on the demand. So far as the latter is concerned, there is an enormous demand at the present time for copper for electrical purposes, and I can only explain its present low price by supposing that it is due to the depression in trade generally, and the policy of buying from hand to mouth for present requirements alone. Still, I do hope that before 12 months are over we shall see a very considerable rise in the price of copper; that would help us materially, for the copper we are getting at present is very rich indeed. There is a great deal more I could say as to the present position of the mine and its prospects for the future, all of which, however, would be summed up in the words of Captain Cleme that "everything looks very cheering." You will expect me to say something about the arsenic contract. Well, last year the arsenic contract was very satisfactory, and we hope that the next contract we enter into will be as good, if not better. (Hear, hear.) I am not going to say anything more—in public at any rate, because such a course might be dangerous to the interests of the company. If I am blamed for not speaking out, I can only reply that I must do as I have done in the past, and as my predecessor did before me. You must repose a little confidence in us in regard to that matter, which is a very difficult one to handle. Hitherto we have managed to handle it very well, and we shall strive to do so in the future, both in your interests and in our own. There is one thing I have omitted. In speaking of the illness which prevailed in Devon and Cornwall, I did not mention the severe illness of that very much respected gentleman, Captain Paul, the Duke of Bedford's agent. He suffered a great deal. In fact, he was for some time between life and death. I am very glad, indeed, to hear

that he is now very much better. As adviser and agent to the Duke of Bedford he frequently goes underground in our mines, and he takes a great interest in the welfare of the Devon Great Consols, and all associated with it. I congratulate both the Duke and himself upon his recovery. Last, but not least, we have thought fit in our discretion to consider the question of giving you something more than you have already received. A year ago we announced a dividend of 3s. per share. Six months ago we declared another one of 3s. We are now going to give you another one of the same amount in the course of a few days, so that during the 12 months I have had the pleasure of announcing from this chair three dividends, amounting together to 9s. per share. I hope that will be satisfactory to you. (Applause.) I have much pleasure in moving the adoption of the report and accounts.

Mr. THOMAS GLEN (director) said: I beg to second that motion; at the same time, allow me to congratulate the shareholders on the very favourable report and balance sheet your directors have been able to place before you. From the report you will observe considerable payments have had to be made for "land damages," legal expenses, renewals of machinery, &c., consequent on the renewal of our leases, which will not recur again for a long time. We have now got everything on the works and mines in very ship-shape order; our staff of employees continue to give us every satisfaction, and are working most energetically. From these facts I think we have every reason to expect a continuance of good times for the Devon Great Consols. Under these favourable circumstances I feel quite sure all the shareholders will now feel satisfied, as the directors themselves do, that the changes we considered absolutely necessary in the management have proved satisfactory, and that we shall in future be no more troubled with the unseemly scenes that have prevailed at our shareholders' meetings in the past. As I have already said, everything at the mines looks well. Our financial barometer, in the shape of our bank book, I am happy to say, continues at "set fair." With these few remarks, I have every confidence that we directors will continue to give you satisfactory results, and I hope good dividends.

Mr. SLOPER had listened with great attention to the remarks of the Chairman, and they seemed to him to have contained very little. The main points had been avoided. Again and again he had said at the meetings that the company was proceeding towards liquidation, and in support of this view he would refer the shareholders to the report, where it would be found that there was no sinking being carried out, while the copper was being removed from the upper levels. When dividends were declared at the expense of capital, everybody in the City of London would know what the result would be. He wished especially to call the attention of the shareholders to the £1000 charged in the profit and loss account, which had been expended upon rebuilding the furnaces. This expenditure, he maintained, ought not to come out of capital but out of revenue, and so it was necessary to reduce by that amount the sum figuring in the accounts as profits. He noticed, further, that contrary to custom the number of men in the service of the company was not mentioned in the report; and he wished to have the information. In further confirmation of his view as to the future of the company, he might mention the fact that already one part of the mine had been abandoned. Other companies published full details of their operations in arsenic, and he failed to see any reason at all for the reticence observed by the Chairman on the subject. He also wished to enquire why the shareholders had not been informed as to the condition of the lease just concluded on behalf of the company. Further, he wished to protest against the fact that the shareholders were not allowed to see the books of the company. The Articles of Association were framed with a view of giving the proprietors that privilege, and if everything were straight and above board, he did not see any reason why a contrary course should be pursued. As to the views the Chairman had expressed about the machinery and plant of the company, he should be glad to know if they were shared by Mr. Lane. These remarks he had not offered in any spirit of antagonism to Devon Great Consols, but he had protested for some years against the management of the company, and had always maintained that the proper policy to be pursued was one of husbanding the company's resources. Were this done he should have every confidence in the future of the concern.

Colonel GORHAM could not endorse the views which Mr. Sloper had expressed. It appeared to him that instead of paying a dividend out of capital, the directors had simply expended £1000 upon renewing the furnaces at the works, and he understood that the same sum was written off every year for depreciation. Some considerable time had elapsed since anything was done to the furnaces, and he thought the directors had done quite right in not waiting until their complete collapse occasioned a much greater expenditure. As to the removing of the ore from the upper levels, he did not know what mining was unless it were the removal and selling of ore. (Hear, hear.) Of course it was well known to everybody that the more they took of the ore, the less remained. If the lower levels had not been worked it was because they objected to spending money on works, the return for which was doubtful, while they were working at what they were certain was remunerative. The result seemed to justify the policy of the directors, for as far as he could see the 9s. paid in the way of dividends came to something like 33 per cent. upon the selling price of the shares. For that reason he felt extremely grateful to the directors for having worked so well in the interest of the shareholders, and he only hoped their management would be as successful in the future. As for the contention advanced by Mr. Sloper that the shareholders should be allowed free access to the books, it seemed to him without justification, for if it were allowed anybody interested in the manipulation of arsenic would be able by the simple purchase of a 30s. share to investigate the whole of the company's books, and take advantage of the information contained therein. (Hear, hear.)

Mr. LANE (director) said that after the accounts had been made up to April 30 he had deemed it prudent to visit the mine. When he arrived there he received a statement from the manager that the £1000 mentioned had been laid out upon the works, and he knew that to be the case, because he had seen that the amount had been paid. He took the opportunity offered by his visit of seeing the manager of the refinery department, and he received from him the information that the £1000 had been laid out in connection with his department. The amount was chargeable to capital, but it should be remembered that 10 per cent. had been written off the sum, leaving only £760 of the original £1000. The furnaces would not again want repairing for many years, and before that time the whole amount would have been written off. When at the mine he questioned whether so large a quantity of arsenic, &c., as named was kept in stock, but discovered that such was the case. His co-directors had offered to accompany him upon the occasion of his visit, but he preferred to go alone, and accordingly wrote to the Captain telling him that he was to be expected upon the following day. The confidence of the shareholders would be justified by the fact that the investigations he had made at the mine had fully borne out the statements contained in the report. (Hear, hear.) Mr. Sloper had spoken of the possibility of the mine soon being worked out. Six months before the estimates of the value of the various stopes amounted to 152 tons per fathom. On the 30th April they amounted to 179 tons per fathom. That was to say, they were getting out from every fathom of ground worked 27 tons more than was the case six months previously. That being so, they ought to accept the statement of the manager that the mine was improving. It should be remembered, however, that the directors were bound to accept the statements of the manager upon that and similar matters. In judging of the year's work it should not be forgotten that the illness, which had prevailed in Devon and Cornwall, had militated strongly against them. Had it not been for that they would have been able to carry out more work. Did he think that the shareholders had the smallest ground for questioning the straightforwardness of the management he would at once resign his position, for he would not think of remaining in a company, or allowing his name to be used in connection with it, that was not directed in a manner just to the shareholders. (Hear, hear.) As for Mr. Sloper's suggested policy of sinking, with copper at the present price, such a course would be madness in the extreme. No manager

would ever think of recommending such a thing. (Hear, hear.) All they could do was to work out what they had already got, and that they were doing, and they were finding month by month improvements which they had never expected. The manager would tell them that their reserves amounted to 7000 tons. No agent could possibly tell them what the reserves would be in 12 months time. As long as they continued to raise the ore and make a profit they were satisfied. He had taken the trouble to inspect the whole of the company's machinery, and could testify that to put it together would occasion an expenditure of from 5 to 10 times the amount at which they valued it. As to the proposal to sell the machinery in one part of the mine, the Duke of Bedford would not allow anything of the sort. The idea was, in fact, absurd. Mr. Sloper did not seem in his criticisms to be actuated by a kindly spirit towards the company. (Cheers.)

Mr. MOSES BAWDEN was strongly of opinion that if Mr. Sloper had been possessed of a little more practical knowledge he would never have got up in a public meeting to make the remarks they had had from him from time to time. He was continually harping upon the idea that the mine was going to ards liquidation. In all his experience he had never known a mine that was not going towards liquidation. (Laughter.) Their manager, however, had assured them 12 months ago that the mine would not go into liquidation during the ensuing 12 months, and he thought that the same assurance might confidently be given to the proprietors upon the present occasion. Mr. Sloper was not correct in his idea that they had entirely suspended development. They had driven several levels, and had, in fact, carried out a number of development works, as would be seen from the report. Mr. Sloper had upon several previous occasions asserted that there was no possibility of the mine paying its way. Well, the mine had paid its way.

Mr. SLOPER: No, no; I never said any such thing. (Order.) Mr. BAWDEN would refer Mr. Sloper to the reports of former meetings for confirmation of his statement. The present satisfactory nature of the company's finances was all the more gratifying because, according to Mr. Sloper, the returns were not so large. The management had had under the closest examination all the details of cost and had made many reductions during the past twelve months. (Cheers.)

Mr. COPPIN was inclined to congratulate the meeting upon the expression of views which Mr. Sloper's questions had elicited from the directors. The possibility of the company's liquidation had frequently been mentioned at previous meetings, but he had never felt so sanguine with regard to the future as upon that occasion. His view of the Chairman's speech had been that it was dictated by a desire to give the shareholders the fullest information as to the present position of the property. They were greatly indebted to Mr. Lane for having made a personal visit to the mine in the interest of the shareholders. His expression of satisfaction at what he had seen should come as a great encouragement to the shareholders.

Mr. RAIT (one of the auditors) congratulated the Chairman, directors, and shareholders on the favourable circumstances in which the company was placed. The accounts were kept with great clearness, and explicitly indicated the position of the company. The treatment of the accounts was characterised by the greatest fairness and honesty. (Hear.)

Captain CLEMO expressed his thanks to the Chairman and directors for the great kindness he had received during his recent illness. With regard to the mine, he could only substantiate what he had said in his report. They had been working the mine in the way to secure the best interests of the shareholders. That had always been the case during the 50 years that he had been associated with the mine. His efforts on behalf of the company had been assisted by men of great skill in mining affairs. At present the prospects of the mine were exceedingly favourable, and he hoped they would continue so. (Hear, hear.) He might mention that they were not taking anything away below the 130.

The CHAIRMAN said he would answer the observations which had been made in general terms. With one of the oldest shareholders who had spoken at the last meeting, and with many of the other proprietors who had communicated either personally or by letter to him, he deeply regretted the continued attacks made by Mr. Sloper upon the reputation of the mine. For years Mr. Sloper had come forward with the same criticisms, and had done his best to throw illfeeling between the management and the shareholders. He had hoped that on the present occasion, at least, Mr. Sloper would have refrained. Shareholders who had supported his action at previous meetings had since expressed their satisfaction at the management. He (the Chairman) had been associated with the company in the times of its difficulty, and now that the concern had been rescued, and was one of the very few of its character existing in Cornwall and Devon, he had hoped that Mr. Sloper would have come forward to congratulate them. They had had very hard work to get favourable terms in the new lease—not from the present Duke, who was known to be a liberal-hearted and generous man by the whole county. The shareholders had had from time to time particulars of the terms of the lease. They were stated at the meetings, and would be found in some of the reports. Such terms no other in the two counties had got. After the last meeting Mr. Sloper made application for the terms of the lease, when it had been carefully gone through by the solicitor clause by clause and line by line. Mr. Sloper knew as well as he did what the terms of the lease were. (Hear, hear.)

Mr. SLOPER: I do not know. (Oh!)

The CHAIRMAN: You must know. The leases were on the table at the last meeting, and you could have consulted them. If you ask me any questions now I shall be pleased to answer them. Roughly, the agreement is for 1-36th on certain conditions.

Mr. SLOPER: What are those conditions?

The CHAIRMAN: There are certain deductions from copper and arsenic. Continuing, the Chairman said that if Mr. Sloper's proposal to husband the resources of the mine had been carried into effect a call would have had to be made on the shareholders. During the last three years the mine had paid off all the loan and made dividends to the aggregate of £11,267, equal to £1 per share. It was his duty to say that he thought the statements made by Mr. Sloper to be misleading and tended to depreciate and injure the property. The question of the £1000 had no bearing at all upon the dividends that were being paid. They had always founded their dividends upon the cash statements of the receipts and expenditure, and they should continue to do so. As to the complaint about the books they did not intend to let the shareholders or anybody else see the whole of what they were doing in regard to the sales of arsenic. There were now only five in the trade, and if the shareholders would only back him up, he would take care to further their interests in that matter. That statement of his he invited them particularly to bear in mind. (Loud applause.)

The resolution for the adoption of the report was then put and carried unanimously.

The CHAIRMAN said the next question was that of the re-election of himself as a director. He was perfectly willing to retire if the shareholders so desired. ("No, No.")

Colonel GORHAM proposed a resolution re-electing the Chairman, and expressing the gratitude of the shareholders for the energy and ability he had so conspicuously displayed in the management of the company's affairs for so many years. (Hear, hear.)

The resolution was duly seconded, and carried with great enthusiasm.

On the motion of Mr. SLOPER, seconded by Mr. NORRIS, Messrs. G. T. Rait and F. W. Freese were re-elected directors of the company.

Mr. LANE proposed a hearty vote of thanks to Mr. Bawden and Captain Clemo and the agents for their able furtherance of the company's interest. Upon the occasion of his visits to the mine he had been more than satisfied with what he had seen.

Mr. FREESE seconded the motion, pointing out that the prospect of success of the mine depended upon the efforts of the agents and those under them.

The CHAIRMAN put the resolution, remarking that the indefatigable exertions of Mr. Bawden and Captain Clemo entitled them to the greatest gratitude, which was carried unanimously.

Mr. BAWDEN and Captain CLEMO briefly returned thanks. Mr. ROSS proposed, and Mr. SUTCLIFF seconded, a hearty vote of thanks to the Chairman, and the directors for their exertions on behalf of the company, which was carried with enthusiasm. A resolution having been passed voting 30 guineas for schools in the locality of the mine for the miners children, the proceedings terminated.

WEST KITTY MINE COMPANY.

The fresh discovery on the south side.—A new mine opening.

An ordinary general meeting of the West Kitty Mine Company was held on Thursday, at the offices, 37, Walbrook, for the purpose of considering, and, if deemed advisable, passing a resolution, and making a call.—Mr. JOHN B. REYNOLDS presided.

The SECRETARY (Mr. F. J. Harvey) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, in looking over all the correspondence which has taken place as between shareholders and myself since the issue of the circular convening this meeting, I observe that the very few friends who have adversely criticised our policy have done so in such a kindly way as to leave no doubt in my mind that, had they been present with us this morning, they would hold up both hands in favour of the course we recommend. They are very few in number, not exceeding nine, and considering that we have 350 shareholders in the mine, this practical unanimity will be satisfactory to the managers as it will be fortunate for the company. I agree entirely with that shareholder who has written me a very pathetic letter, begging that if there is to be any division that he may not be expected to take part in it. If there is one thing more than another in any company I dislike it is a divided vote, and where everything is conducted honestly and above board, as in this company, there can be no possible excuse for anything like controversy. But, whilst admitting this, I say that the position taken up by the managers and by the committee is calculated to surprise the ordinary shareholder in a Cornish dividend-paying mine. It seems, on the face of it, an extraordinary thing to him that he should be called upon to put his hand into his pocket on account of a mine which he supposed to be working at a considerable profit. But, gentlemen, the ordinary shareholder in a Cornish dividend mine is not an ordinary individual. (Laughter.) Ask him to explain to you the methods upon which our large railways and other companies are financed, and he will look aghast when you beg him to unravel the balance-sheets you place before him. Nor is this to be wondered at. He cannot be expected to understand that concerning which he has never had any special knowledge; but the circumstances of West Kitty to-day are exactly the circumstances in which many of our leading and splendid companies outside Cornwall are placed. They pay regular and satisfactory dividends, but frequently conditions which were never anticipated arise, and additional capital is required. The question then is as to whether the expense is to be charged to revenue, or whether it is not a fair and proper thing to raise additional capital, so that the dividend or profit and loss account may not be interfered with. On strict business principles I have no hesitation in saying that the committee had no other course open to them in this instance, unless, indeed, they resolved to recommend the issue of new shares. Now, gentlemen, if they had advised the issue of new shares they would have kept on strict business lines. But speaking as a large shareholder, and for myself only, I should have been compelled to have adversely criticised such a proposition, and for this reason—that an additional number of shares would have been a permanent injury to the shareholders. We shall cheerfully pay this call, and in 12 months time, and probably before, we shall have forgotten all about it; but if we had resolved to issue new shares, we should have been reminded of the consequence, and, as I think, the unfortunate consequence every time we had to distribute our profits. Gentlemen, we are not without a precedent for the plan we are now recommending. I shall be corrected if I am wrong when I say that Wheal Grenville Company made the precedent. I almost envy the position of Wheal Grenville in having done so, and I am sanguine enough to believe that Wheal Grenville made a new and safe departure in the management of our Cornish mines. I am not ignorant of the Act of Parliament for the better regulation of mines within the Stannaries of Devon and Cornwall, and there we have power to do the very thing that we propose to do to-day—power, I say, to provide for any probable deficiency three months ahead. We to-day estimate our deficiency between this and the expiration of three months to be £3000 on the working of the south section, in consequence of the large expenditure we must commit ourselves to in order that this new section of West Kitty may be worked to the advantage of the company. New pitwork, new engines, and additional mining appliances of almost every sort and description have to be procured, to say nothing of additional stamps, renewals, and so forth, and the sum of £3000 will not be sufficient to cover the total; but the remainder will be no improper tax on revenue, and can be easily met. It may be argued that the committee have shown want of forethought in not providing a reserve fund so as to meet contingencies; but, gentlemen, that criticism falls to the ground simply because certain members of the committee did at one time recommend that very policy, but the shareholders disregarded the suggestion, and said, "No, let us divide all the money, for why should we leave it in the banker's hands." Gentlemen, I am very sorry to say that their resolution on that occasion was in strict accordance with Cornish custom, a custom which I declare not to be the highest wisdom in an enterprise of this kind. (Hear, hear.) But let that pass. We are getting wiser, and I have no doubt when Cornish men can find time to attend to their own business, instead of troubling themselves about outside matters, we shall have another Act of Parliament for the better regulation of mines within the Stannaries, which will insure the adoption of sound financial principles, by which we shall see that Cornish mining, or rather those who manage it, will not be able to revel in an antiquated past; but will be forced much to their own advantage and credit to move with the times. (Hear, hear.) Gentlemen, we will not wait for that happy time to come before we make an endeavor to put this company in the position which its altered circumstances demand. Nothing has given me greater pleasure than the discovery that has been made in the south section of West Kitty. Gentlemen, it is a splendid thing for the company, it is a splendid thing for the district. St. Agnes is a district abounding in mineral wealth. That is a fact, in proof of which we can point to magnificent results. A deposit in one place which has produced £200,000 profit, in another place £110,000 profit, in another place £60,000, and in other places hundreds of thousands of pounds profit, and all these at comparatively shallow depths, is good enough for the most cautious particularly when the district is not one half developed, and when there is no reason to believe it is not as valuable in depth as it has been in shallow levels. I truly believe that West Kitty will yield as much profit in the future as it has done in the past. But it is asked what about your gossans and crosscourses? Well, gentlemen, whatever ignorant people may think, the true geologist will tell you that to these gossans and crosscourses you are to a great extent indebted for the exceptional and rich character of the district. What have the gossans and crosscourses done for us in West Kitty? To the ignorant they have caused disappointment and dismay. To those who know about them they have simply been causes of encouragement, confidence and enthusiasm. It is true, gentlemen, that we sometimes lose the lode, but only, as it were, for the moment. By intelligent and prudent action we find it again greatly to our delight and profit. There are times which call for strong measures. There are times which call for strong words and decided action. That hour has arrived in the history of mining in St. Agnes, and these strong words shall be spoken, and that energetic action shall be, if I have any influence, the order of the day. (Cheers.) The Chairman concluded by moving the following resolution:—

That to provide for the estimated deficiency which will be caused by the energetic working of the new south section of West Kitty Mine during the

next three months, a call of 10s. per share be, and is hereby, made on the 6000 shares of this company, payable to the bankers of the company, Messrs. Bolitho, Williams, and Co. (Limited), late West Cornwall Bank, Truro, on or before 30th June next, such call to be placed by the said bankers to the credit of "West Kitty—South section—capital account."

Mr. LENOX, in seconding the resolution, expressed his pleasure at the large and influential attendance, showing, as it did, the deep interest which the shareholders took in the affairs of the mine. Already they would have perceived from the clear and lucid statement of the Chairman, to whom they owed an incalculable debt of gratitude for his painstaking and watchful care of the company's interests, that had it not been for the rich and valuable discovery recently made on the south side, there would have been no question of a call. The discovery, however, had been made after persistent efforts, and in the face of much scorn and opposition, and practically it amounted to the addition to their property of another rich mine. He had made every enquiry in the neighbourhood from persons familiar with mining matters, and there was a general opinion prevailing that the money it was proposed to spend would be expended to great advantage. Undoubtedly the discovery which had been made would be worth such an effort, and it would be extremely unlikely if the money expended did not become a source of great profit to the company. The difficult question was how the money should be raised. There seemed to be three alternative ways, each of which had come under the consideration of the committee. One was a proposal to add 500 new shares of £5 each to the capital of the company. To that they objected, because it involved an undue and unwise watering of the company's capital, and as they occupied the position of investors rather than speculators waiting to profit by a turn on the market, they could not but remember that by increasing the amount of capital they decreased proportionately the amount of the dividend received. To that they were much averse, more especially in the recollection of the satisfactory dividends which in years past they had received, and which they hoped would continue in the future. Another way to raise the money was by charging it to revenue account, but they thought that such a course would be not only prejudicial to the property, but also to the shareholders. So after considering all possible courses, they came to the conclusion that it would be better to pay the money at once by making a call of 10s. per share. None of them could say that the payment of such a call would not be something of a strain upon them. He was sure, however, that the course proposed was a wise one. To begin with, it would strengthen the finances of the company. Some time ago a proposal was made for the establishment of a reserve fund, and at the time he thought it a wise one. However, he supposed the pleasure of having large dividends at the time outweighed the desire for the formation of such a fund, and so it fell through. The sooner the money was provided, the work commenced, and the tin brought into the market, the better for all of them. The works in the other part of the mine would be continued as usual, and the dividends paid. Of course, the dividends largely depended upon the price of tin, and it was a much nicer thing to get larger dividends when the price of tin was high. The scheme detailed in the speech of the Chairman had been elaborated after careful thought and enquiry, and he had much pleasure in seconding the resolution which had been proposed.

The CHAIRMAN said the committee had not been satisfied to rely entirely upon the advice of the managers, although they fully recognised the value of their judgment, which stood very high, so they had called in an independent surveyor. (Hear, hear.) They had accordingly selected the foremost man in Cornwall, and a man who was in no way interested in the company, and whose judgment was, therefore, entirely unbiassed. He referred to Mr. Henderson, of Truro, whose name was a household word, and who was well known for ability and high business principles; this statement was a very long one, and perhaps the shareholders would hardly desire him to read it. Briefly, however, he thoroughly approved of the plans laid down in the managers' report, and by Mr. Michell, whom he was very glad to see present. He wished to refer also to the very kind letters which had been received couched in courteous terms, but criticising somewhat adversely the proposal of the committee. Mr. George Williams, of Teignmouth, had written to say that he did not send his proxy to the committee because he could hardly conceive of a more inopportune time than the present for making a call. He suggested that the matter should be postponed until the August meeting, held on the mine, by which time the American question would probably have been settled, and it would be known how it affected Cornish tin. At no London meeting could a matter be so fully and intelligently debated as at one held on the mine. He (the Chairman) might explain that he and his colleagues had been adverse to dragging the largest shareholders, who lived in London, down into the country to attend the meeting. Captain John Tonkin, Mr. Horton, and Mr. Heard also, strongly approved of the policy of the committee. Captain Nancarrow wrote approving the action of the committee, his opinion having been formed by a personal investigation of the mine. These were samples of letters which had been received, and it was evident that, on the whole, the balance of opinion was in favour of the course taken by the committee. He read a report from the agents as follows:—"WEST KITTY (St. Agnes Scories): We beg to hand you the following report of the mine:—The 108 fathom level west is worth £7 per fathom. The rise in back of the 108 fathom level is worth £7 per fathom. The 94 fathom level west is worth, for tin, £8 per fathom. The 84 fathom level west is worth, for tin, £12 per fathom.—South ground: The 60 fathom level, driving east, the lode is 3 feet wide, and worth, for tin, £13 per fathom. The 60 fathom level west, the lode is 5 feet wide, and worth, for tin, £11 per fathom. The rise in back of 60 fathom level is up 7 fathoms. The lode is 5 feet wide, and worth, for tin, £12 per fathom. The ground to the south of the slide has opened up remarkably well, and as we have such a large extent of ground to the south, it is very important that we should get a shaft down as soon as possible, for the better working of this part of the mine.—Stops: No. 1 stop in back of 90 fathom level is worth £15 per fathom. No. 2 stop in back of 90 fathom level is worth £20 per fathom. The stops in bottom of 84 fathom level are worth £20 per fathom. Three stops in back of 84 fathom level are worth £15 per fathom each. The stop in bottom of 70 fathom level is worth £14 per fathom. The stops in back of 70 fathom level are worth £15 per fathom. The stop in bottom of 60 fathom level is worth £12 per fathom. The stops in back of 60 fathom level are worth £14 per fathom. The stop in back of 40 fathom level is worth £11 per fathom. We have 30 men working a tribute, varying from 7s. to 13s. 4d. in the £. We intend to commence changing our pitwork next week, and hope to complete it in about two weeks. Taking a general view of the mine the future prospects are very good indeed, and will justify the carrying out of the proposed scheme.—(Signed) John Williams, Joel Hooper."

Mr. MICHELL said it had been suggested to him that the call should be paid in two instalments instead of one.

Mr. MARTIN supported that view. Living in Cornwall and knowing something of the way in which the Cornish people regarded the proposed scheme, he felt sure it would be received with much greater favour if it were proposed to make the call in two instalments instead of one. When he had first received the circular he had some doubts as to the wisdom of the proposed course, and it had struck him that with the present unfortunate outlook for Cornish mining it was rather an inopportune time to make a call. Since, however, he had heard the admirably clear speech which Mr. Reynolds had made, and had become aware of the very large number of shareholders who, by sending their proxies to the committee, had signified their approval of their policy, he would frankly admit that his mind had been changed on the point. What they now proposed to do was to develop an absolutely new mine. He could fully endorse what Mr. Reynolds had said about the St. Agnes district. They had kept alive mining there, and with the confidence the people had in the property he felt sure the company would continue to operate successfully for a long time to come at St. Agnes.

Mr. WRIGHT also expressed the view that it would be better to have the call paid in two instalments. Many of them had lost so largely in other ways that they hardly had the necessary capital at their command. The money would not, perhaps, be wanted all at once.

Mr. E. W. MATTHEWS congratulated the Chairman on the unanimous feeling of the meeting. He had been much impressed, both by the speech of the Chairman, and by the letters he had heard read. There seemed to be no other course open but the one proposed, but with regard to the call it would be a great convenience to them if they were to have it made in two instalments.

Mr. J. W. MOKILL had been disposed to question whether the present was the right time to carry out the proposed work, but he was now quite at one with the committee upon that point. No doubt they would all cheerfully and gracefully pay the call that was now asked of them. He hoped, however, that no more calls would be made subsequently.

The CHAIRMAN assured the meeting that the committee had no idea of making any further call, and the present one would not have been proposed but for the south ground necessity. Considering the south ground was turning out so well, they could hardly abstain from taking the necessary steps to develop it. He might mention that they had received an offer to purchase the new property at £10,000.

Mr. MICHELL said that £10,000 did not anything like represent its value.

Mr. WRIGHT asked for some further details as to the cost of the work.

The CHAIRMAN replied that it was not proposed to spend the whole, or nearly the whole, of the money in sinking the shaft. That expense, which would not be considerable, would be, as he remarked in his opening address, a first charge upon revenue. He had particularly requested the agents to give him the outside figure of the costs and they put it at £3000.

Mr. MARTIN: That will include everything—new stamping appliances and milling appliances.

The CHAIRMAN remarked, in answer to Mr. MATTHEWS, that the committee had anticipated, and, as they thought, very successfully combated any difficulty which was likely to arise in regard to the water in the mine. One of the inspectors to the Prince of Wales had visited the mine and had expressed his conviction that it was perfectly safe so far as water was concerned.

The CHAIRMAN said the meeting were evidently in favour of having the call paid in two instalments, and in that matter the committee were quite in the hands of the shareholders, and would take that course.

Mr. BUDD expressed his full concurrence with the proposed scheme, and said there was little doubt that the shareholders would receive back much more than they had expended.

Mr. GALT was convinced that the course it was proposed to take was the right one. He should like to know, however, how long the sinking of the proposed shaft would take.

The CHAIRMAN replied that the committee had gone very carefully into the question as to how long it would take to carry out the works, and they had expressed the hope that twelve months would cover them. The agents had promised to complete the operations in that time, if possible.

The amended resolution, providing for the payment of the call in two instalments—viz., 5s. per share on or before June 30th, and the remaining 5s. per share on July 31st, 1894, was then put and carried unanimously.

A resolution of thanks to the Chairman and committee having been enthusiastically carried, the proceedings terminated.

NORTH-EASTERN BULTFOUNTAIN (LIMITED).—A meeting of the holders of the debenture stock of the North-Eastern Bultfontein (Limited) was held on Monday, at the Institute of Chartered Accountants, Moorgate-street, E.C., for the purpose of considering a scheme of reconstruction. Mr. Frederick Whinney, the liquidator, presided, and stated that the debenture stock amounted, in round figures, to about £200,000. It was assumed that they held a mortgage on property in Africa; that mortgage was contested by the liquidator in Africa. Proceedings had been taken in Africa in order to enable him to get possession of the property. Those proceedings were taken in the High Court of the Cape, and the judge decided that an Englishman was not entitled to possession of the property, and that it must remain in the hands of the African liquidator, and he decided, inferentially, that the debenture deed was good until it was set aside. Even if the debenture-holders could conserve it for that purpose, the liquidator had power to sell, and the result would be a very small return to them. The debenture-holders had already sanctioned a scheme of reconstruction, but it was found impossible to carry it out, and they were, therefore, called together to consider a further scheme, which took its rise under the following circumstances. Mr. Mosely, a large debenture-holder of the company, had been out to Africa, and had seen the local creditors, who were prepared to contest anything and everything, and he had arranged the basis of the scheme with the local creditors. Mr. Mosely was prepared to endorse his opinion of the mine by subscribing for £10,000 of debentures, and was to have a seat on the board in London and Africa, and also to receive one governor share, which would entitle him to 25 per cent. of the net profits. So far as he (the Chairman) could see, the scheme before them was the only one likely to give them a return. Mr. Floorheim moved a resolution approving of the scheme, which was seconded and carried. Meetings were subsequently held of the unsecured creditors and contributors, who also approved of the scheme.

LONDON AND SOUTH AFRICAN EXPLORATION COMPANY (LIMITED).—An extraordinary general meeting of this company was held on Tuesday, at 19, Finsbury-circus, E.C., to consider the advisability of authorising the directors to agree to that part of the scheme of reconstruction of the North-Eastern Bultfontein Company which particularly affected the company. Mr. C. J. Powne presided, and explained the negotiations that had taken place between Mr. Mosely and himself. Mr. Mosely, who was proceeding to Koffyfontein, agreed to examine the North-Eastern Bultfontein property, and he, having lately returned to England, expressed the opinion that the mine was good if economically worked. He (Mr. Mosely) also pointed out that the first company undertook to work too many claims, and that if the London and South African Exploration Company, which is the landlord, would agree to accept a surrender of 321 claims, then he would start a new company, and himself subscribe £10,000. Since Mr. Mosely left South Africa the scheme had been considerably modified, and where the directors pointed out that the scheme required modification Mr. Mosely had shown every readiness to meet them in a fair spirit. The Chairman then moved the following resolution:—"Resolved, that this meeting do hereby authorise the board of directors of the company to agree, with any modifications, to that part of the scheme of reconstruction of the North-East Bultfontein (Limited), which is as follows:—(a) Accept the surrender of 321 claims, part of the 671 mining claims of the company, in the Bultfontein Mine; the new company to have the right of selecting the 321 claims for surrender, but all the 321 must be in a compact block. (b) Accept payment of rent and other money due to date (except interest) in debenture stock of the new company at par, except £3000 to be paid in cash. (c) Waive claim for interest. (d) Accept debenture stock at par for the first 12 months' rent from the registration of the new company on the 350 claims taken over. Mr. Schott seconded the resolution, which was put to the meeting and carried unanimously. The Chairman said it was proposed to manage the mine on the spot, and a board of local managers had been appointed, consisting of the following gentlemen:—Mr. N. Anderson, of the firm of E. W. Tarry and Co.; Mr. Melville, an old digger; Mr. Mallet, a solicitor; and Mr. James Lisle. A vote of thanks to the Chairman for presiding terminated the proceedings.

RECENTLY the north reef at the west end of the New Bultfontein property has been intersected at the fourth level, showing visible gold freely, and giving excellent panning. Where out it varies in width from 4 feet to 5 feet. No. 4 shaft, which is being put down in country rock on the central section outside the reef formation, is now down about 135 feet. As soon as it has attained a depth of 150 feet a cross cut to the reef will be put in.

MISCELLANEOUS MEETING.

THE OXFORD, LIMITED.

A model music hall—Smaller dividend.

THE second annual meeting of the Oxford (Limited) was held on Monday, at the Oxford Music Hall, Mr. HUGH ASTLEY (the Chairman) presiding.

The SECRETARY (Mr. Ilford Ibbetson) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen, I have now to move the adoption of the report and balance sheet, but before doing so I should like to say a few words to you on the state of your property. You have heard from the report that the gross receipts for the twelve months ended April 30 last were £50,525. I do not think that is at all a sum to be derided: on the contrary, I think it shows that we have got a really good business in our hands; but, at the same time, I certainly had hoped that the receipts would have been larger. There are three causes that I might mention which have operated against us during the past year. The weather was the very opposite of what music-hall managers, and, therefore, music-hall shareholders, could desire. The summer in England is generally confined to a few weeks, but last year it was represented by fully six months. The keen competition that now exists in London is another cause which has, to a certain extent, operated against us, but my own impression is that we have outlived that. I suppose there is hardly a man in this hall at this moment who can doubt the effect of the intense commercial depression which has pervaded the whole of London, and, in fact, the whole of England. Certain very frequent visitors at our music halls have been entirely absent, and I do not think that was because they did not want to come, but because they did not have the money to spare. Those three reasons—and there are others—I think account for the fact that we have not taken more than £50,000 in round figures. Now, I should like to say a few words as to the expenditure, which has been larger than we hoped it would have been. The reason is this: When we found that the Fates, as it were, were against us, we determined not to cave in, but to use every possible effort, and by, perhaps, what some people might call a lavish expenditure, although I do not think it was unnecessary, to keep the business together and establish it, as I now believe we have done on a very firm basis. You are sitting now in what I consider a model music hall. The experience of my co-directors and myself leads us to suppose that there is not only not in London or in this country, but throughout the whole of the Continent, a more commodious and well-arranged building for the purposes for which it is intended. It is in every respect well found and well suited for the purposes for which it is rightly used. I have every reason to hope that in various ways we may be able to reduce the expenditure to a certain extent in another year, and increase the dividend by so doing. There is another remark I wish to make to you. We have not simply provided this place with artists that have been listened to and seen in various music halls in London, but we have been enabled to get a variety of entertainments here, amongst them the wrestling lion, the talking horse, and the Dahomey warriors, the bullet-proof coat, &c., which have helped to swell our takings and to keep the programme attractive. Having a certain amount of experience in these matters, I beg to say that I think it has been a very attractive programme throughout the whole of the year, and had it not been for the unprecedented heat of last summer, the depression of trade, and, I will add, the keen competition, I believe we should have paid a higher dividend. You will observe from the balance-sheet that we could have paid very nearly 6 per cent. We carry forward the sum of £2598, not thinking it wise to pay the whole of this amount away. In the balance-sheet you will also see that the cash in hand at this moment very nearly totals up to £10,000. I might mention just before I sit down that it has come to the ears of my co-directors and myself that we do not hold that amount in the concern to lead the shareholders to suppose that we are very anxious for its welfare. All I can say is that that is utterly wrong. The collective holding of your directors in the shares and stocks of this company is £21,000. I now beg to move:—"That the directors' report and accounts be, and are hereby adopted, and that the dividend recommended by the directors for the 12 months ended 30th April last of 3 per cent. be and is hereby declared."

The resolution having been seconded, Mr. ABRAMS asked if the collective holding of the directors of £21,000 was in debentures or ordinary shares.

The CHAIRMAN: In both. Last year £30,000 worth of additional capital was offered to the shareholders, and they took it all. The directors subscribed £18,000 towards an issue of debentures of £20,000, which was absolutely necessary to open that building. The debentures were first offered to the shareholders, and they only took £2000 worth.

Mr. DAVIS wished to know why no profit and loss account had been published, how the expenditure was made up, and what elements the directors were receiving. As the company was out of debt, he did not see why the directors could not pay a dividend of 6 per cent. If they could not pay more than 3 per cent., he for one would not be satisfied with them.

Mr. E. DE LA RUE thought the directors had followed the usual course in giving a balance sheet, and he took it that the profit and loss account was on the table for any shareholder to look at.

Mr. ALLEN said he had no fault to find with the directors as a body, but he thought they might fairly have declared a dividend of 5 per cent. instead of carrying so much forward to next year: then their property would not have been depreciated to the extent it had been. He would like to give the directors an opportunity of denying a statement which had been made to the effect that the directors, having the command of three music halls, charged an undue proportion of the salaries of the artists to which ever hall they liked. In conclusion, he bore testimony to the splendid management of the hall, and excellent entertainments given.

The CHAIRMAN, in reply, said he and his co-directors were quite willing to resign if the shareholders were not satisfied, and they were doing their best. Their remuneration was £150 each per annum. As to the question of salaries, the artists, in some cases, received less there than at the Pavilion.

The resolution, after some further discussion, was then put and carried.

The CHAIRMAN next proposed the re-election of Mr. H. Newson-Smith as a director, and remarked that that gentleman was a tower of strength to the board.

The motion was duly seconded and carried unanimously.

Mr. B. Lindsey, the auditor, having been re-elected,

Mr. DE LA RUE proposed a vote of thanks to the Chairman and his colleagues.

Mr. DAVIS, in seconding the motion, said he believed the directors did their best in the interests of the company.

The motion was unanimously adopted, and the meeting ended.

THE Chairman of the Simmer and Jack Gold Mining Company has given the only reliable details of the coming big amalgamation scheme which have yet been published. He says that the blocks to be joined together will be the Simmer and Jack outcrop claims, the Simmer and Jack's deep block, the South Simmer and Jack, the Consolidated Deep Levels block, the Salmon block, and the Rand Victoria block; that the working capital will be between £250,000 and £300,000, to be raised by the (guaranteed) issue of new shares at £5 each; and that five new shares will be given for every four Simmer shares held. As a temporary measure the Consolidated Gold Fields Company has arranged to lend the Simmer and Jack Company £75,000 (as and when required) at 6 per cent. interest, so that the latter can proceed with the equipment already suggested.

ABRIDGED PROSPECTUS.

CONVERSION AND REDEMPTION

5½ per Cent. First and Second Mortgage Debentures OF DE BEERS CONSOLIDATED MINES, LIMITED, BY THE Issue of £3,500,000 5 per Cent. First Mortgage Debentures.

Redeemable by means of an Accumulative Sinking Fund, not later than the 1st January, 1915, by annual drawings at £108 per cent. The Company, however, reserves the right of redeeming by drawings at £105 per cent. all or any of the Debentures (over and above those to be redeemed by the ordinary annual drawings), on giving, by advertisement, at least six months' notice, such notice to expire six months after the day fixed for the payment of any Coupon.

All outstanding 5½ per cent. First and Second Mortgage Debentures of the Company not presented for Conversion, will be repaid on, and cease to bear interest from the 1st February, 1895, and the 1st January, 1895, respectively, in conformity with a notice to be issued by De Beers Consolidated Mines (Limited).

The Trustees for the 5 per Cent. First Mortgage debenture holders will be:

THE LORD ROTHSCHILD,
ALFRED CHARLES DE ROTHSCHILD, Esq.,
THE RIGHT HON. SIR HERCULES G. R. ROBINSON, BART.,
G.C.M.G.

This issue of £3,500,000 5 per cent. First Mortgage Debentures will be secured on the whole property and undertaking of the Company. The Security will be effected as to the Company's Mining Properties by a Mortgage to the Trustees, and as to the rest by a floating charge. As soon as practicable, after the 1st February, 1895, the Deed for securing the New Series of First Mortgage Debentures will be registered in the proper registry at Kimberley.

Pending the execution and registration of this Deed and the preparation of the new Debentures, Scrip Certificates of DE BEERS CONSOLIDATED MINES (LIMITED) will be issued, to be exchanged for the definite Debentures as soon as they are ready for delivery.

Messrs. N. M. ROTHSCHILD AND SONS are authorised by DE BEERS CONSOLIDATED MINES (LIMITED) to receive subscriptions for the above issue at par.

Subscriptions will be received by them at their Offices, New Court, St. SWITHIN'S LANE, LONDON, in existing 5½ per Cent. First and Second Mortgage Debentures, which have not been previously drawn.

Applications for the New 5 per Cent. First Mortgage Debentures in exchange for existing 5½ per Cent. Mortgage Debentures, which have not been previously drawn, will be received any day (except Saturday) UNTIL FRIDAY, THE 8TH JUNE, 1894, INCLUSIVE, on the following conditions:—

Subscribers in Debentures will receive allotment in full, 5½ PER CENT. 1ST MORTGAGE DEBENTURES:—Holders of these Debentures must not detach the Coupon due 1st August, 1894, from the Debentures, and for every £100 nominal capital they will be entitled to receive Scrip Certificates of equal nominal value bearing interest from 1st July, 1894, and in Cash a bonus of £3, as well as £2 11s. 8d. (less Income Tax) for interest calculated as follows:—

| | |
|---|---------|
| Coupon due 1st August, 1894, at 5½ per Cent. per annum, paid one month in advance | £3 15 0 |
| Less Interest at 5½ per Cent. from the 1st July, the date from which interest will commence on the New Mortgage Debentures, to the 1st August, the due date of the above Coupon | 0 9 2 |
| | £3 5 10 |

Plus Difference between Interest at 5 per Cent. and 5½ per Cent. from the 1st July, 1894, the date from which interest will commence on the New Mortgage Debentures, to the 1st February, 1895, the date on which all 1st Mortgage Debentures not presented for Conversion will be repaid

£3 11 8

5½ PER CENT. 2ND MORTGAGE DEBENTURES:—Holders of these Debentures must not detach the Coupon due the 1st July, 1894, from the Debentures, and for every £100 nominal capital they will be entitled to receive Scrip Certificates of equal nominal value bearing interest from the 1st July, 1894, and in Cash a bonus of £2, as well as £3 (less Income Tax) for interest calculated as follows:—

| | |
|--|---------|
| Coupon due 1st July, 1894, at 5½ per Cent. per annum | £3 15 0 |
| Plus Difference between Interest at 5 per Cent. and 5½ per Cent. from the 1st July, 1894, the date from which interest will commence on the New Mortgage Debentures, to the 1st January, 1895, the date on which all 2nd Mortgage Debentures not presented for Conversion will be repaid | 0 5 0 |
| | £3 0 0 |

For fractional parts of £100 proportionate allotments will be made. Cheques for the above-mentioned Bonus and Interest will be payable on the 2nd July next.

Application must be made on the form annexed to the Prospectus, and accompanied by a deposit of £5 per cent. in money, or an approximate amount in convertible Debentures, unless Subscribers prefer to deposit all their Debentures when making application. The whole of the Debentures furnished with all Coupons subsequent to the 1st February, 1894, in the case of the 1st Mortgage Debentures, and the 1st January, 1894, in the case of the 2nd Mortgage Debentures, must be delivered as soon as the Scrip Certificates are ready to be given in exchange, and failure to deliver them in due course will render the deposit on application liable to forfeiture.

Debentures presented for conversion must be listed on forms which can be obtained from Messrs. N. M. Rothschild and Sons.

The New 5 per Cent. First Mortgage Debentures will be issued to bearer in sums of £20, £50, £100, £500, and £1000, with Coupons payable half-yearly on the 1st January and 1st July, in London, as well as at such other places as the Company may from time to time direct, but the Coupon payable on the 1st January, 1895, will be attached to the Scrip Certificates.

The drawings for the redemption of the Debentures will be held in the month of December in each year, commencing in December, 1895, and drawn Debentures will be paid on the 1st January succeeding the date of the drawing.

By order of the Board,
E. B. TYMMS, Secretary.

LONDON, 30th May, 1894.

ON Tuesday the manufacturers in the Midland iron trade stated a growing preference is being shown for sheets of steel instead of iron as hitherto, says the *South Wales Daily News*. The significant tendency which has recently been noted for ironmasters to enlarge their steel rolling facilities rather than erect new iron forges is receiving additional emphasis, and the ironworkers are very anxious regarding their future prospects. The new metal does not, however, answer in every case, for galvanised sheet manufacture steel sheets are now being rolled from plate scrap costing £3 per ton, also for steel bars costing £4 5s.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

ACHILLES GOLD FIELDS.—The following telegram has been received from Achilles Mine, New Zealand:—"Have cleaned up after crushing 370 tons quartz, gross yield 234 ounces gold to the value of £900. Winze from No. 3 level down 90 feet, bottom payable gold."

AUSTRALIAN BROKEN HILL CONSOLS.—The following telegram has been received from the general manager, dated Broken Hill, May 26:—"15 cwt., 8200 ounces of silver. The ore body is diminishing in size."

BAYLEY'S REWARD CLAIM.—The following cable, dated 26th inst., has been received from Melbourne by this company's London office:—"220 level free of water, work will be resumed this week. This week's run 750 ounces. Mine looking well."

BECHUANALAND EXPLORATION.—The following cablegram, dated 30th inst., has been received from the general superintendent of the above company:—"A representative of one of the leading Johannesburg groups of capitalists has offered to develop and float our Camperdown property, consisting of 40 claims near the Gwelo River. Shall I accept? Have located Bechuanaland Exploration Company's 100 square miles of land."

BRILLIANT BLOCK.—The directors have received the following cablegram from Charters Towers:—"Have crushed during the fortnight 676 tons of quartz for 953 ounces of gold. Have declared a dividend of 9d. per share, payable on Thursday, 7th June proximo. The profit on the fortnight's run is £1700. The approximate value of this return is £3285."

BROKEN HILL PROPRIETARY.—For the week ending the 24th inst. 12,203 tons of ore were treated, yielding 1169 tons of lead, containing 332,532 ounces silver. The price of the shares in Melbourne is £2 10s. 6d. buyers.

EL CALLAO.—Messrs. Baring Brothers and Co. (Limited) have received the following telegram from El Callao Mining Company:—"1376-1400 ounces of gold produced by El Callao Mine for the month, and 2226-2250 ounces by the Colombia Mine. Dividend of 12 francs per share declared by the Colombia Company."

ELKHORN.—Bullion produced in mill for the week ending 26th May, 9365 ounces.

EXPLORATION COMPANY (Alaska Treadwell Gold Mining Company).—Cablegram from Alaska announces the May clean up as follows:—"Shipment of bullion, \$30,734; tons of ore milled, \$14,241; tons of sulphurets treated, \$244; of bullion there came from sulphurets, \$5198; estimated gross expenses for period have been \$19,282. The net profits available for dividends for the present financial year are, therefore, about \$405,500, exclusive of profits from sale of stores, &c."

JAY HAWK AND LONE PINE CONSOLIDATED.—The directors have received the following telegram from the manager viz:—"Estimated mill return 7000 ounces. Mill idle 12 hours to clean up. Lone Pine shaft has been sunk a further 56 feet."

KAPANGA.—The directors have received the following telegram from the manager, viz:—"During the week the shaft has been sunk 8 feet. We have again intersected a strong, well-defined vein in the bottom of the shaft.—Coromandel: The reef shows gold freely. Good results are expected."

KABOONGA.—The following cablegram has been received from the manager at the mine:—"Boring in the face of top level 70 feet; delay owing to softness. Other rise 78 feet."

LAS CABBESSE MANGANESE.—Production for the week ending May 26 (six working days) 423 tons, or a daily average of 70½ tons.

LOMA.—The company received the following cablegram as to the completion of the ditch:—"The Cruz-Gorda section has been satisfactorily carried out; the result of the examination is very satisfactory. The ditch has been delivered to the superintendent."

MARBELLA IRON ORE.—The directors have received the following telegram from the mines:—"Output of ore for May, 1060 tons."

MOUNT MORGAN.—The directors have received the following telegram from the head office, Rockhampton:—"We pay £25,000 on June 1, being dividend of 6d. per share (free of dividend tax) for the month of May."

NEW GORDON DIAMOND.—The following cablegram has been received from the general manager in answer to a cablegram sent to him on the 23rd inst.:—"Mine free of water to the 320 feet level. Unless something very unforeseen occurs, will start hauling central claims 20th of June. Will enter Old Gordon claims 1st July."—Note: The mine is now unwatered to the working level, and the water remaining below that level, together with the daily make of the mine, is now so small in quantity that it can easily be dealt with in the ordinary course of our mining operations.

NEW QUEEN GOLD.—The directors have received the following cablegram, dated Charters Towers, May 26, giving result of the No. 1 formation crushing for past fortnight:—"No. 1 formation 235 tons, yielding 330 ounces gold."

OCEANA TRANSVAAL.—First monthly return of coal sold, April, 1894: 1492 bags of 200 lbs. each.

ORION.—By cable 24th May: Dividend 10 per cent.

PAHANG CORPORATION.—The directors announce the receipt of cable from the mines, giving particulars of the output for the month of April, as follows:—"In 20 days of 24 hours each 635 tons of stone were crushed, producing 40 tons 2 cwt. of tin oxide. 30 head of stamps running, working costs \$9250." An official note adds that on the basis of the last sales the approximate value of the above output is, say, \$16,500, showing a profit over working expenses of \$7250."

PESTARENA UNITED.—Gold return for May: 692 ounces from 448 tons, equal to 1 ounce 10 dwts. 21½ grains per ton.

SUTHERLAND REEF.—Mine manager cables:—"Hauling engine has started hauling in every way most satisfactory."

VICTORY (Charters Towers).—The London office has received the following cablegram from the head office in Sydney, dated May 31:—"Crushing (for fortnight) from No. 2 shaft, 430 tons for 471 ounces of gold."

WENTWORTH GOLD FIELDS PROPRIETARY.—The following cablegram has been received from the mines:—"Since the date of our last cablegram we have crushed 1000 tons of ore which have yielded 1030 ounces of gold. Prospecting works being pushed ahead. The stopes are looking better."

The Johannesburg Star records the purchase of the entire stock of the De Beers diamonds by a syndicate. The price ruled higher than on the occasion of the last big purchase.

REVIEWS.

METALLURGY.

An Introduction to the Study of Metallurgy. By W. C. Roberts-Austen, C.B., F.R.S. Third Edition. (Charles Griffin and Co., Limited.)

A new edition of Professor Austen's well-known work is an event of sufficient importance in the metallurgical world to demand notice at our hands, more especially since in the present case, the new edition is not a mere reprint, but contains so much new and valuable matter that it may almost be looked upon as a separate book, planned, indeed, on the same fundamental lines as the former one, but on a more liberal scale and including a wider range of subjects. The objects of the author are, perhaps, best stated in his own words, taken from his concluding paragraph:—"The adaptation of metals for use is an important part of the metallurgical art, which is by no means limited to the extraction of metals from their ores. . . . In the immediate future the most marked technical advance may be expected, not from improvements in smelting operations, but from the study of the properties of metals and alloys, as influenced by thermal or mechanical treatment, and by the presence of foreign matter." Professor Roberts-Austen has throughout this work applied with marked success the theories of modern chemical and physico-chemical science to the elucidation and explanation of the phenomena, with which the metallurgist is rendered familiar in the everyday practice of his art, but of the real meaning and correlation of which he performs remained in ignorance. Nor does this remark apply merely to the unscientific smelter, the "practical" man, the glorifier of the school of "rule of thumb," and despiser of all science; it is equally true even of those scientific men who laid the foundation of the science of metallurgy, but who were unable to continue the work until the labours of such men as Lothar Meyer, Arrhenius, Van't Hoff, Ostwald, J. Thomsen, and others in the fields of molecular physics and physico-chemistry, supplied the material which has been so well utilised by the author of this work. The earliest chemists were metallurgists, and their results, empirically obtained, formed the basis upon which the modern theories of chemistry have been developed. During the course of this development, however, the chemical theorists seem to have separated themselves almost entirely from the metallurgical empiricists, so that the latter were working at an empirical art, whilst the former were elaborating a theoretical science. Professor Austen's work has done much to unite these divergent branches of what is really but one subject to—it need hardly be said—the mutual advantage of both, and he has thus contributed very greatly to the elaboration of that science of metallurgy, the foundations of which may be said to have been laid in this country by his great predecessor at the Royal School of Mines, Dr. John Percy.

The previous edition of the work now before us is so well known to all students of metallurgy, that nothing need be said as to the arrangement of the subject in the present edition which has therein closely followed its predecessor. A new chapter on thermo-chemistry has been inserted, which gives a brief account of the units of measurement adopted, and of the methods employed in making calorimetric estimations; a large portion of it is devoted to thermal equations, and very valuable tables are given of the thermal equations most needed in metallurgical operations, and of the number of thermal units evolved in the formation of the principal metallic compounds. This subject is, however, of such vast importance that we could wish that even more space had been devoted to it, and we should have liked to have seen the difference between endothermal and exothermal reactions more clearly defined, and its importance more accentuated. In the chapter on fuel and thermal measurements considerable attention is devoted to the subject of pyrometry, the practical value of which is now being rapidly recognised; most of the modern forms of pyrometer are described, prominence being given to that beautiful instrument, the Le Chatelier pyrometer, which our author has done so much to popularise in this country. The section on fuel is merely a brief sketch, and in no sense an exhaustive account of the subject, which would, no doubt, have exceeded the proposed limits and scope of the present book; it can, indeed, be looked upon as little more than a classification of the various types of fuel, together with a brief account of the principles that underlie their production and technical application. In this connection we may express our surprise that Professor Roberts-Austen has seen fit to describe the Wilson gas producer at length, whilst entirely ignoring the more modern and more efficient producers, which may be conveniently classified as water-bottom producers, and which present several marked advantages over the older type. A very interesting portion of this chapter is that devoted to the consideration of the melting points of alloys, and the effects of small quantities of impurities upon the melting points of metals, together with the relation which the observations recorded on this subject bear to the modern theories of solution.

Reference is being also made to that most interesting purple alloy of gold and aluminium discovered by Professor Roberts-Austen. It is a curious coincidence that we owe the discovery of this remarkable alloy to him, whilst we are indebted for the discovery of the gold coloured alloy of aluminium and copper to his predecessor, Dr. Percy.

The chapter on the thermal treatment of metals is almost entirely taken up with a discussion of the behaviour of iron and steel in the various operations of hardening, tempering, and annealing, the action of heat upon other metals being barely referred to. It is almost needless to say that the views here set forth are those that have been recently advocated by Mr. Osmond and Professor Roberts-Austen, and which are here handled with great ability, the case as presented being a very convincing one. We venture as a matter of detail to remind Professor Roberts-Austen that his assertion on page 119 that "carbon, when free, or when associated with iron, may readily be changed from its diamond form to the graphitic state, though the converse change has not as yet been effected," can hardly be taken as correct to-day, in view of the recent successful experiments of Moissan on the formation of the diamond.

The chapter on alloys is very brief—in view of the importance and absorbing interest of the subject, all too brief; we cannot say we like the nomenclature proposed by Sir G. G. Stokes, and adopted by Prof. Roberts-Austen, in which the term "ideal" alloy is used to designate what is certainly not an alloy at all under some conditions, and what may possibly not even be an alloy under any conditions. Under this head we miss any reference to Dr. Percy's classical experiments on lead and copper. It would, however, be ungracious to criticise this chapter too minutely, seeing that the author in his preface promises us a separate volume on alloys, to which we have no doubt all metallurgists look forward as eagerly as we do ourselves.

The table of the physical constants of the metals (p. 53) is a most valuable one, bringing together, as it does, all the latest determinations of these co-efficients; could not the author, however, in conformity with the high scientific standard of his whole work, give us a more scientific arrangement than an alphabetical

one, which, whilst possibly convenient, is certainly not calculated to bring out the relations of the elements to each other? The author has himself suggested this remark, inasmuch as his recent application of the periodic law to this subject has given an importance to the relations of the physical constants of metals which they did not hitherto possess.

In concluding our necessarily brief and imperfect review of Professor Roberts-Austen's book, we can only say that, in our opinion, it is simply indispensable not only to the scientific metallurgist but equally to the chemist and physicist. The appreciation with which the first edition was received makes it unnecessary to say more; we are convinced that no one who has read the former edition will hesitate to study the present one, which cannot fail to add to the already high reputation of its distinguished author.

A GREAT GOLD FIELD.

The Coolgardie Gold Field. By Albert F. Calvert, F.R.G.S., F.G.S.E., &c. Price 1s.

This little work has made a timely appearance. Now that the Coolgardie Gold Field has awakened the eyes of the world to the richness of Western Australia, and now that it is attracting universal attention, and has reached so great an eminence as to become one of the greatest gold-producing districts, Mr. Calvert's book is likely to interest a wide circle of readers. It is written by one who thoroughly understands his subject, who has not only travelled all over Western Australia, but has made himself so intimately acquainted with every gold field, that he has now become a recognised authority. In going through the several pages of this work we do not come upon much that is new, for the greater part of it has already been published in the *West Australian Review* and in the columns of other contemporaries, including our own, but the information is gathered up and focussed in a convenient form, which makes it all the more valuable. Mr. Calvert, himself, does not seek to hide this fact, for in his preface he says:—"It will be noted that I have let the warden, the geologist, the explorer, the mining engineer, the metallurgist, the water-supply superintendent, the capitalist, the miner, the amateur—each tell his own tale. No work of this kind can possibly be altogether original, except in arrangement; and only the other day I read a Press notice to the following effect:—'The author has adopted the best method of telling his story—viz., by giving the actual letters, diaries, and personal statements of the parties concerned.' This plan I have followed." Accompanying the work is a map of Western Australia on an elaborate scale—indeed, it is a *fac-simile* of the one we issued as a supplement some four months ago. Undoubtedly, it greatly enhances the value of the book. To describe the contents of the volume would be useless labour. We cannot do better, probably, than quote the words of the author respecting the idea he had in his own mind, "My object is to give plain, unvarnished facts concerning the results already attained on the gold field; setting forth its advantages, prospects, and drawbacks." This object, in our opinion, Mr. Calvert has attained.

MINING IN LANCASHIRE.—The annual report of Mr. J. Gerrard, Her Majesty's Inspector, on the mines in No. 6 district (Manchester and Ireland) was issued on Wednesday. During 1893, in the North and East Lancashire coal mines, 38,791 persons were employed, being a decrease of 308 as compared with 1892. The quantity of coal produced was 7,603,755 tons, the decrease of 2,840,299 tons being due to the strike. In the same period 75,627 tons of stone and 75 tons of rock salt were raised. The price of coal in North and East Lancashire was 7s. 0 9-8d. per ton, as against 7s. 6 1/2d. in 1892. For Ireland the figures were 8s. 0 10-17d. and 8s. 11d. respectively. In North and East Lancashire 58 lives were lost by accident, being one for every 694 persons employed, and one for every 137,492 tons raised. In Ireland the percentages were considerably higher. The majority of the accidents were due to falls of roofs. The death rate per 1,000,000 tons raised was 7672 in the Lancashire district mentioned, as compared with 6043, the average for the United Kingdom.

Exploration Concession over Two and a-half Million Acres, and the option to acquire upwards of Forty Thousand Acres for Mining Purposes.

The Preference Shares now offered *participate pari passu* in all surplus dividends, in addition to the Preferential Dividend of 10 per Cent.

No Founders' Shares.

No portion of the Capital has been underwritten.

THE WEST AUSTRALIAN GOLD CONCESSIONS (LIMITED).

SHARE CAPITAL - - - £25,000.

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33, OLD BROAD STREET, E.C.

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IRVING M. SCOTT, Manager Union Iron Works.
JACOB H. NEFF, President California Miners' Association.
P. N. LILIENTHAL, Manager Anglo-California Bank (Limited).
W. F. GOAD, Vice-President, Wells, Fargo, and Co.
D. M. BURNS, Capitalist.

R. C. CHAMBERS, Manager Ontario Mine, Utah.
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buying or selling on its own behalf, or except upon commission, or
as agent or factor for others.

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advance the price beyond the original figures at which the price and
commission have been agreed upon with the seller.

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interests in such may be sold or money obtained for development work.
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or examinations for non-resident mine owners on any of their mines
in the United States, and obtaining special information as to their
condition and so forth (said reports being confidential).

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experience in mining operations, and it is their intention to place
the Company in a position to inspire the confidence of all who seek
its assistance in its integrity and fair dealing.

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and to the Anglo-Californian Bank (Limited), London, as to the
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LONDON: JUNE 2, 1894.

CAPITAL FOR HOME MINING.

THE illustrations we gave a fortnight ago will, no doubt,
explain how it is that the Cost-book System has hitherto
held its ground in the West of England, in spite of the dis-
like so openly expressed for it in the London market. In the
comparison, which has been kept studiously moderate all
through, we have supposed perfect honesty and reasonable
economy in both cases, and the difference in results is certainly
striking. Evidently, such a cost-book company could live
through considerable periods of poverty or depression, while a
precisely similar limited company would have to liquidate and
reconstruct, using up the very funds required for more extended
developments underground or at surface in that most unprofit-
able manner. The Cost-book System is cheaper at the start
and more elastic in working; and, furthermore, it has hitherto
included almost every one of the successful mines in the West,
and absolutely every one of the mining prizes, while the limited
plan has been discredited by a long series of ghastly failures and
frauds. And the Cost-book System has the further advantage
from the shareholders' point of view that they retain the most
complete control over their property, instead of prac-
tically signing away such control by the tacit acceptance of
Articles of Association skillfully drawn up for that

very purpose by lawyers who are paid by them,
but who do not scruple to avow on occasion that
they are present to advise the board against its share-
holders; and inasmuch as meetings must be held and accounts
presented at intervals not exceeding four months, no shareholder
is entitled to plead ignorance if he continues his holding after
it continues to be prudent for him to do so. The one defect of
the Cost-book System, as it has usually been carried out, is that
the pursuer is practically his own auditor, and it is notorious that
this has led to gross abuses in some cases; but it admits of a
very easy and complete remedy. It is only necessary at the start-
ing of the company to provide by a resolution in the cost-book
that the accounts shall be audited by a professional accountant
to be chosen from time to time by the body of shareholders, and
the whole danger is removed. This plan has been adopted with
excellent results in some cases. It can be adopted by any exist-
ing company by a special resolution, and we would strongly
recommend that it should be made universal.

We need not consider whether the Cost-book System is suit-
able or not in the case of foreign mines, for its operation has
been practically limited to the West of England by the various
Limited Liability Acts. With the slight but important modifi-
cation recommended above, it possesses all the advantages of
the limited system, with a great many others in addition, and its
continuance within the Stannaries is not due to prejudice, but
to experience. Nor is the present difficulty of getting money for
home mine development due to any real and general dislike to the
Cost-book System on the part of speculative investors, though
the pure speculator does not find the system to suit him very
well, and has, therefore, done his best to cultivate such a dis-
like and to magnify it afterwards. But in truth money is hardly
to be got at the present moment for home mining—even for
the most promising speculations—either by the Cost-book or by
Limited Liability. The speculative investor occupies a sort of
middle position between the investor proper and the speculator
proper. On the one hand, he should be prepared in any given
case to lose the whole of his investment; but, on the other
hand, if his holdings are well-chosen and sufficiently varied
he may reasonably reckon on making much more than he loses.
The late Mr. JOHN ARTHUR PHILLIPS found as the result of a
most exhaustive examination that 14 per cent. could be made by
judicious investors in home mines, and in spite of lowered prices
and foreign competition, we are convinced that 10 per cent. at
least can be made at the present time—not, perhaps, for the
moment, but in any series of 8 or 10 years taken together. But
the selection must not be made exclusively from the broker's
point of view. If the speculator is not in a position to judge
from his own knowledge of affairs, he should take the advice of a
responsible mining expert who knows the local conditions, and
not rely on that of a mere broker, however honest or however
shrewd, for his advice will often be to sell and make a profit—or
even to relinquish when it would be much more advantageous to
hold on—and vice versa.

DEVON GREAT CONSOLS COMPANY.

WITH one anticipated exception, the shareholders in the
Devon Great Consols Company are completely satisfied
with the present position of their undertaking, as
indeed, they have every reason to be. For some time now the
mine has been a regular and generous dividend producer. Its
distributions have amounted in the aggregate to £11,267, a sum
equal, as an elementary problem in arithmetic will demonstrate,
to 22s. per share. This record throws into bold relief the barren
and unprofitable decade which preceded it, and recalls to mind
the old vigorous days of the Consolidation, when dividends fell
thick and fast. Mr. PETER WATSON, in his speech from
the chair, gave an exposition of the affairs of the company, as
they now stand, so well grounded upon the cold logic of facts
as to carry with it irresistible conviction. Taken in connection
with the manner of his speech, the matter of it was hopeful in
the extreme. Things seem prospering with the company all
along the line. Most shareholders, given handsome dividends,
are neither fearsome for the future nor unduly critical upon the
present. With the case under consideration, however, the
honourable proprietor might have resisted the opiate
influences of dividend declarations, and have brought
his keenest powers of observation and enquiry into
play without discovering either a serious flaw in the policy
of the directors, or reasonable cause for apprehension in regard
to the future. As a typical and suggestive instance of the
wisdom reflected in the directorial management, the matter of
the coal contracts is worth a good deal. The ordeal through
which all parties interested in coal have recently passed is still
sufficiently fresh in the public mind to render needless the task
of emphasising it. Throughout the whole period the Devon
Great Consols Company have been fast in the security of a con-
tract for supply at twelve shillings a ton. By their
foresight in this particular the directors have saved
to the company a sum variously estimated at from
£800 to £1000. Mr. WATSON'S bare claim for credit to the
directors will surely be conceded to him. There is all the
difference in the world between coal and arsenic, but the com-
modities are joined in the circumstance that the company have
made excellent contracts for both in the past, and hope to make
similarly advantageous ones for the year now commencing. The
Chairman was careful not to enter upon any optimistic pro-
phesies as to the ensuing financial year. His utterances in that
respect are always very guarded, and the fact lends additional
weight to his forecast as to the copper market. Last
year he was unable to predict any rise in the
somewhat weighty metal, and the circumstances justified
his view. Now that, on the other hand, he thinks "copper
ought to be £10 higher" in value, it may be hoped that again
his words shall be justified in the after event, with the certainty
that in such a case the company will reap an enormous benefit

from it. Altogether, the whole position of the company is best expressed by the word "cheering," which Captain CLEMO applied to it, and Mr. PETER WATSON repeated.

Mr. SLOPER has half redeemed his reputation as a humourist by seizing the present occasion to attack the directors. Mr. SLOPER had a reputation for consistency to maintain, and under the circumstances he could hardly have spoken otherwise than as he did. His criticisms came to but little. There was his ever-recurring complaint that the shareholders were not allowed access to the books. By "shareholders," he meant himself; for it is some time since anybody else proposed to look at the books, or hinted at a desire to do so. Mr. SLOPER's mournful prediction of liquidation in the immediate future of the company is rather humorous than anything else. It recalls to mind one of MAX ADELER's characters who was so firmly impressed with the belief that he was going to die upon a particular day that he made all the arrangements for the funeral, and got the church choir to run over his favourite anthem, so as to hear how it would sound as the cortege moved cemeterywards. When the mourners arrived they were astonished and disgusted to find that the officiating corpse was still instinct with the breath of life—a fact which sent the undertaker fuming away, growling out that such an old fraud ought to be buried anyhow, dead or alive. The Devon Great Consols will, in all probability, survive Mr. SLOPER's premature wailings, and there merely remains the duty of wishing, in all sincerity, that Mr. SLOPER will not be seriously indisposed until the Devon Great Consols has run its course.

THE MINING AND METAL TRADES.

THE position of the metal markets at the present time is anything but a pleasing one for those concerned in the industry of metalliferous mining. Not only are prices brought to a level which renders it almost impossible to make any but the richest mines pay, but there is no movement in the market, and, therefore, very small prospect of an early rise to more profitable figures. Of course, the main influence in determining this state of things, is the general badness of trade and consequent lowness of prices. The metal interests only suffer in common with every other form of enterprise. Not only this, but a good many authorities enjoin upon us that the cause of the depression is also common to all, and that improvement can only be brought about by the same means. The panacea which they recommend is a rise in the price of silver. There can be no doubt that the fall in the value of silver has done a great deal to accentuate the general cheapness of commodities, though, perhaps, one may go further than the bi-metallists and conclude that over-production, which is the instrument in the fall of silver, has equally exercised its influence in other directions. It is scarcely possible to put down all the current evils of the industrial position to the silver question, when one perceives that the decline in the prices of the white metal, and of produce respectively, bear no sort of ratio to each other. For instance, during the past year silver has declined 29.1 per cent., while the fall in the price of wheat has been 18.3 per cent.; and wheat has suffered at least as much as any other commodity, except silver, from the downward course of prices. There is this fact to be borne in mind—that no one, except a few of the more fervent of the bi-metallists, believes in the prospect of an early advance in the price of silver. The action of the United States and India has been to cripple its position as a currency medium too severely to allow of such a rise. While the Broken Hill mines can maintain their present output, the silver difficulty is not likely to be settled on the basis of a fixed ratio; and there is every prospect that they will be able to do so indefinitely. At the same time, now that the ridiculous policy pursued by the United States in its stimulation of output is abandoned, we may certainly expect to see silver take up a stronger position than it at present occupies. Supplies have been very materially reduced, and the low prices are leading to a large employment of the metal in the place of electro-plate and other materials. But if we cannot put more faith in the probability of trade revival through the rehabilitation of silver, there are at least good hopes of the same end being attained through the increased output of gold. There is no doubt that the gold fields of Western Australia will soon be adding considerably to the world's production of gold, while the auriferous industry is making progress in nearly all parts of the world. The silver question has had a very distinct influence in stimulating gold mining. The repeal of the SHERMAN Act has set free a large number of trained miners who can no longer find employment in the American mines, and must turn their attention to some other branch of the industry. Not only are the hitherto neglected gold deposits of Colorado being worked with excellent results, but Yankee miners are swarming into the gold districts of Canada, Central and South America, South Africa, and Australia. There can be no question but that there will be a large diversion of British and American capital into new gold mines all over the world, and the more stable basis that will thus be given to the world's currency ought to stimulate enterprise in other directions. It is precisely that impetus which other branches of the metal markets need if they are to escape from the difficulty in which they at present find themselves. An increase of railway building, for instance, would exert an enormous influence upon the position of copper, tin, iron, and steel. There are already some signs of advance in this direction, mostly in connection with new gold mining enterprises. The South African Republic is about to spend 1½ millions sterling in the new railway to the borders of Natal, while one or two other projects for new railways will, when carried out, more directly benefit the English machinery interests. Once capital begins to be diverted into these channels, a powerful influence will be at work in favour of a recovery. Already

there is the conviction that the very length and persistency of the depression must soon begin to tell. The under-buying that has been the characteristic feature of every market in the world must in time be followed by more vigorous purchases, and with this improved demand we should be relieved of the pressure of foreign competition, which at present tells so heavily upon every branch of industry.

NOTES AND COMMENTS.

IT has been said, and in the saying there is a large element of truth, that no evil exists without its corresponding good. In other words, "it is an ill-wind that blows nobody any good," and this is, in part, exemplified by the fall in silver. Not only has it set invention at work to devise means of mitigating the evil and minimising its effects, but to it has been due no feeble or futile spurt in the gold mining industry. Prospectors and others are directing their attention more and more exclusively to the discovery and exploitation of the precious metal, and with appreciable and encouraging results. One of the districts in the world which is suffering most acutely from the unprecedented fall in silver is the Barrier Range in New South Wales. Here there are numbers of unemployed, who know not how to pass their time, or how to gain a living. Necessity, however, is forcing them to exploit for gold, not without hopeful results. It is not a secret to metallurgists that gold exists on the Barrier, and assays have even shown it in cases to be very rich.

A WRITER in the *Broken Hill Age* has been drawing attention to this fact. He remarks that gold and the whole group of platinoid metals exist on the Barrier, and that prospectors, having some pretensions to knowledge on the subject, have found that the trend of the platinoid deposits is in a direction from south-west to north-east. "Numerous assays of these deposits by the eminent assayer of the New South Wales Department of Mines, Mr. Frazer, of Adelaide (an assayer of good repute), and Messrs. Johnson and Matthey, of Hatton-garden, London (who certainly hold first rank in the metallurgical world), have all revealed considerable traces of gold. Other assayers for the many prospecting parties who have tried the field near the Mulculca find from time to time have reported up to 5 dwts. to the ton. Mr. Peters' claim at Mulga Creek has at times given more than 3 ounces. The directors of the original Platinum Company have, since the disastrous dissipation of the bulk of its funds in law proceedings, incident to the necessity for protecting its areas, gone further afield, and made at least one fair discovery—viz., of ironstone fit for flux, and containing a minute portion of gold and varying proportions of other minerals. The new Mulculca gold field is but a few miles east of this claim."

He also draws attention to the efforts that are being made, on a considerable scale, to find auriferous ironstone sufficiently free from silica and other objectionable constituents for fluxing purposes, as it is recognised that such stone would contribute considerably towards profitable results in local smelting, and thus somewhat mitigate the consequences to the town of the depression in the silver industry. He observes that much of the auriferous ironstone at Waukaringa is pure hematite. The nearest approach to what is required that has so far been found on the Barrier is situated about 11 miles from the Hill, and carries traces of gold and varying quantities of silver, lead, copper, platinum, iridium, and nickel. One curious feature in connection with this find is the varying proportions of the metals yielded in different assays—viz., copper from 4 to 7 per cent., platinum from a trace to 4 ounces per ton, iridium from a trace to 1½ ounce, and similarly with nickel. The find, he is rightly of opinion, is certainly deserving of further work, and thinks that the Mines Department should favour the Barrier with a little more of its attention.

We need scarcely reiterate a truism that is universally known and lamented—we mean the deplorable effects that result from the employment by mining companies of ignorant and incompetent managers. It is not one part of the world that has suffered from this remediable lack of wisdom, but almost every region, with a result to the mining industry which must be deplored. So prevalent is this want of judgment and business capacity, indeed, that it cannot be brought too frequently to the notice of those responsible. The latter, of course, find in the end it does not pay them to employ this cheap and common labour, but long before they have awakened to a knowledge of this fact, and before they seek to apply the remedy incurable mischief has been done. The *Adelaide Observer*, in the issue which we have received by this week's mail, has been drawing attention to this, and has deplored the fact that "greater loss has been caused in Australia on account of mining mismanagement than through any other form of incompetence. Consideration must be given also to the important and suggestive fact that scores of mines now lying idle would, but for managerial incompetence, have been turning out rich stores of wealth, and helping to vivify business in the districts where the properties are situated. The actual losses are great, but the potential gains which have been missed are still greater." Happily, this reiteration by the Press is slowly but surely meeting with reward.

THE shareholders in the Randfontein Estates Gold Mining Company are to be congratulated upon the condition of their finances as reflected in the report of the directors, submitted to the fourth annual general meeting held at Johannesburg at the end of April, and confirmed by the speech made from the chair upon that occasion. There can be little doubt from the record of the profits for the past 12 months, and the extraordinary manner in which they have been multiplied from quarter to quarter as the new plant got more and more into

working order, that a brilliant future awaits the company. By the sale at par of its reserve shares, the directors have managed to clear the company from the whole of its liabilities, including the cost of the new machinery, and to acquire a substantial balance in hand, so that the Chairman was well within the bounds of caution when he prophesied unhesitatingly that "the company will now enter upon the proud position of being a dividend-paying concern." The large extent and promising nature of the company's properties is a feature only one degree less hopeful than the progress of the accounts during the past year. While the actual operations upon the mine have been pursued energetically, a far-sighted caution has been exercised in the development of the property with the most satisfactory results. The future of the concern will be watched by investors with a good deal of interest, not uncommingled with hope.

THE Nerbudda Coal and Iron Company are in a difficulty beyond the control of the directors. So far as their mines are concerned, everything is going satisfactorily. The discovery of one good seam of valuable coal, and the knowledge gained by boring operations that there are others beneath, are sources of encouragement. Unfortunately, there is an ever-present obstacle to the remunerative working of the property in the price obtainable for the product. In this the company does not stand alone. Other mining companies are undergoing the same unpleasant experience, soon, we hope, to have a termination put to it. But it is in the manner of the difficulty that the Nerbudda Company are exceptionally placed, and here only the action of a Government can bring alleviation. From circumstances occasioned by their obligations to the guaranteed railways, the Government of India have thought fit to supply the companies with coal at a price which leaves no margin of profit, and so have simply annihilated most of the profit-earning capacity of the Nerbudda Company. To all remonstrances against the unfair and destructive competition the India Office have replied in the old, familiar governmental style of unreasoned obstinacy. It merely remains for the directors to seek other methods of influencing this official woodenness. A pungent question or two across the floor at St. Stephen's have been known to produce powerful effects. This obstacle overcome—a large assumption, we fear—there is no reason why, under the present directorial management, the dividend stage should not again be reached. An excellent mine, an energetic staff, and a brisk commercial demand are potent factors in the success of a company.

THERE is every reason to congratulate the directors and shareholders of the Waihi Gold Mining Company on the results of the past year, and on the encouraging prospects now opening out. The adoption of the cyanide process is a stroke of judgment deserving the highest commendation. In the words of the Chairman, it has opened out a new era for the company—an era, judging from the evidence of present appearances, which will likely be characterised by great prosperity. Naturally, the cyanide process will not, of itself, be able to bring this about should the mine be unable to provide sufficient ore for treatment. This, however, seems to be assured. The Chairman laid great stress upon the quantity of ore in sight, and the figures he produced are not likely to occasion much disquietude in the minds of the shareholders. The company has very large and—what is of equal importance—valuable ore reserves in sight above the new 70 feet level, sufficient, we are told, for years to come. Below this level there remains the whole mine unexplored and untouched. Clearly, the future looks brightly. Clouds, undoubtedly, will make their appearance, in the natural course of things, but nothing prophesies that they will be unduly heavy and stormy.

THE great Randt Mine amalgamation scheme, of which we spoke some few weeks ago, is receiving severe criticism in some quarters. It is declared that the Simmer and Jack Company might have purchased the deep level properties, while they were on the open market, upon much better terms than they are now offered by the Consolidated Gold Fields. It is roundly asserted that all schemes of amalgamation or reconstruction in connection with Transvaal gold mining are simply devices for enabling interested persons to carry out purchases of their own property, at exorbitant prices, with other people's money. As a matter of fact, it is not to be supposed that the financiers who engineer these colossal deals will take the trouble. The shareholder has, however, no right to complain so long as his own interests are served, and he should judge each proposal on its merits and not in the light of indiscriminate declamation against Johannesburg finance. One strong point in favour of the amalgamation of properties is that it will tend very strongly to simplify the present difficulties of native labour supply.

ACCORDING to the latest information from Australia the gold fields in the western part of the colony are still absorbing attention, and attracting thousands of fortune-hunters from all parts. Rather than any abatement of this gold fever it is on the increase, and results frequently in serious consequences to many. Although there is plenty of gold, there is scarcely any water, and the sufferings from thirst are terrible. As we have shown from time to time, other districts of the colony are coming to the front. In Victoria, for instance, the revival of gold mining has been very marked, and such occurrences as the discovery of 320 ounces in one lump have given quite a sensational tone to some of the announcements made from the gold fields almost every day. Deep sinking and new explorations at Bendigo are disclosing unsuspected stores of the precious metal, and many reefs scattered over the face of the country are being worked at a profit by a resort to simple appliances. In South Australia the same sort of thing has been going forward, though on a small scale. Mount Pleasant and Nillingo, near Waukaringa, are attracting the principal share of attention at present. But there are many other places at which successful work may be effected.

OUR CITY ARTICLE.

FRIDAY EVENING.

THE MINING MARKET.

An easy carry-over.—South African unusually active.—Collapse at the close.—Nundydroogs hardening.

ATTENTION at the commencement of the week was absorbed by the carry-over, which was very easily and satisfactorily completed. Its predominant feature was the improvement in Rand shares, which was the earliest sign of the extraordinary activity to prevail on the following days. Considerable improvements were manifested among the higher-class and less speculative shares. Transactions upon the new account were necessarily largely restricted. Advances, however, occurred quite out of proportion to the magnitude of business done. City and Suburban, New Chimes, Heriot, and Langlaagte Estate exhibited the most marked of the improvements. Rises were now general, and every class of share was favourably affected. Diamond shares were, however, an exception to this prevailing activity, a relapse of $\frac{1}{4}$ occurring in De Beers and Jagers. A pronounced dullness affected the Indian and Miscellaneous department. Operations, however, though restricted, were conducive to firmness, and what movements took place were in favourable directions. Indian shares were especially firm. On the days immediately succeeding the carry-over Rand shares, for some reason difficult to assign, continued to be buoyant. Good outputs and Continental support were, perhaps, the chief factors in the improvement. Every class of share was affected by the advance, while the more solid investments participated in the movement with especial vigour. Miscellaneous and Indian shares remained quite in harmony with the better tone. The conspicuous feature in this department was the continued fluctuation in Nundydroog. For some days preceding sellers had been forcing the market; but no sooner was 17s. 6d. reached than buying was vigorously recommenced, with the result that the shares closed at £1. There was no change in the market throughout Wednesday, the tone in all directions remaining as strong and hopeful as at any time since the carry-over. Rand and Land shares were remarkably buoyant. In the latter department the feature was Bechuanaland Exploration, which suddenly rose upon a hopeful report from the property. Chartered shares and Consolidated Gold Fields of South Africa were both in demand at improvements. Nundydroogs continued to command a good deal of attention, closing firm at 17-32. Other Indian shares were comparatively neglected. Copper shares, however, rose in sympathy with the generally healthier tone prevailing. Thursday morning opened with a favourable and promising outlook. Movement in an upward direction was continued for some time, but later a disposition to profit-snatching exhibited itself, and arrested sharply the buoyant tendency. One or two shares excepted—Wemmer and Meyer and Charlton were among the strongest—the relapse was as wide as the preceding improvement had been, every class of share being involved in both markets. The relapse was naturally to be anticipated after the recent rapid rise, and is due to no exceptional circumstances.

British Mines.

There has been very little life in the Cornish market during the past week. The run at Dolcoath has not yet been cleared, and this fact is very disappointing. The shares are about 71, with a weak tendency. Carn Brea have been offered at 10. Killifreth have been freely dealt in at 68s. to 71s., closing about 70s. South Crofts are 13. The lode in the bottom level is rather better, and shows signs of improving. South Frances are flat, and have been offered at 20s. Tincofts are firm, with buyers at 12. West Kitty are flat at 8. Wheel Agar are neglected at 47s. 6d. Wheel Grenville has been offered at 17, but had there been any speculative spirit of late these shares would have commanded a higher price. Blue Hills have advanced to 10s. in consequence of an improvement in the 80 east. The lode is worth £50 per fathom, and is the finest that has been seen in the St. Agnes District for a long time.—Risen: Blue Hills, 2s. 6d., and Killifreth 5s.—Fallen: Carn Brea, 5s.; Cook's Kitchen, 2s. 6d.; Dolcoath, 50s.; East Pool, 5s.; Phoenix, 1s.; South Frances, 5s.; West Kitty, 5s.; Wheel Agar, 5s.; Wheel Bassett, 10s.; and Wheel Grenville 20s.

South African Shares.

Despite the magnitude of the carry-over, it was easily and rapidly effected, and its completion on Monday occasioned wide satisfaction. Rates ruled generally easy. De Beers and Jagers commanded from 9d. to 1s. 3d., and gold shares were done at an average of from 5 per cent. to 10 per cent. The most marked feature during the account was in the Rand section, where there was a sustained enquiry for all the higher-priced shares, affecting in sympathy the smaller ones. This improvement, besides marking the general course of the account, was maintained as the prevailing tendency of Monday's business, transactions continuing, however, to be somewhat restricted. There was remarkable activity in Cities, resulting in a rise of $\frac{1}{4}$ to $\frac{1}{2}$. Wemmers bettered to 25. Continental support brought about an improvement in Robinsons and Langlaagte, the former closing at 6 $\frac{1}{2}$ and the latter at 4 $\frac{1}{2}$. A favourable yield for May occasioned a rally in Champ d'Or. Rises also took place in Crown Reef, Heriot, Croesus, Modderfontein, and Van Ryns, the latter shares being affected by the upshot of the meeting. Advances also marked Consolidated Deep Level, Croesus, Goldenhuis Deep, Jumpers, Meyer and Charlton, Rand Mines, Village Main Reef, Wolhuter, and Worcester; while Glencairn rose 6d. to 3s., and Sheba hardened to 28s. 3d. Jubilee, on the other hand, continued to droop, leaving off $\frac{1}{4}$ down at 64, and Main Reef were also $\frac{1}{4}$ easier. The tone in the South African department throughout Tuesday was a firm one, business being especially brisk in the Rand section, upon which all the attention was concentrated. There was a sustained enquiry for the sounder shares, the buoyant tone spreading to the smaller investments. City and Suburban and Goldenhuis were the prominent features. The former advanced a further 10-32 to 15, while the latter gained 7-32, leaving off at 54. Among the other shares which improved were Rand Mines, Henry Nourse, Champ d'Or, Meyer and Charlton, Wolhuter, and Jumpers. An accession of strength was also noticeable in other quarters. Crown Reef, Salisbury, and Simmer and Jack, all recovered $\frac{1}{4}$. New Rietfontein rose to 1 $\frac{1}{2}$, Village Main Reef to 4 $\frac{1}{2}$, and Worcester to 2 $\frac{1}{2}$; these and Durban-Rodepoort, Ferreira, Kleinfontein, Stanhope, and Wemmer showing improvements of $\frac{1}{4}$ or 3-32. Heriot, on the other hand, reacted 3-32, to 4 7-32, and an easier tone was also observable in Langlaagte Royal, New Chimes, and Consolidated Deep Level. Among the lower-priced shares, Metropolitan recovered $\frac{1}{4}$ to 4, and Leopard's Vlei rose 1s. 6d. to 11s. East Rand was up to 10s. 7 $\frac{1}{2}$ d., Block B to 9s., Goldenhuis Main Reef to 11s., and Rietfontein to 10s. 6d. In contrast to the activity displayed in other branches of the market, Land and Diamond shares

were somewhat depressed. Jagersfontein and De Beers both dropped, the former $\frac{1}{4}$, and the latter $\frac{1}{8}$. The narrow and restricted character of the business on Wednesday morning, due in a great measure to the final adjustment of the past account, was succeeded by an active tone which spread into the land department. There the feature was the sudden advance of Bechuanaland, due to a hopeful report from the other side. The shares closed 4s. 6d. better on the day. Chartered were also in conspicuous demand, and advanced 1s. 3d. Among diamond shares De Beers rose $\frac{1}{4}$ to 16 $\frac{1}{2}$. Jagersfontein remained dull. In the Rand department the chief improvement took place in Paarl Central, which, on Paris report, rose 4s. 1 $\frac{1}{2}$ d. to 23s. 6d. A rise of $\frac{1}{4}$ took place in Wemmer, owing to a sudden change in the attitude of speculators at the Cape. Rand mines were again in demand, and left off $\frac{1}{4}$ better at 9—the highest point yet reached. Village Main Reef rose $\frac{1}{4}$ to 4 $\frac{1}{2}$, and Jumpers were dealt in at an improvement; while Meyer and Charlton at 5 $\frac{1}{2}$, New Croesus at 1 $\frac{1}{2}$, Kleinfontein at 1 $\frac{1}{2}$, and New Primrose at 4 $\frac{1}{2}$ were all $\frac{1}{4}$ firmer. Glencairn were firm, and rose 2s. to 35s., while Sheba were 6d. higher at 28s. 9d. Declines to a small extent took place in Champ d'Or, Jubilee, Henry Nourse, and New Chimes. The recent sustained and general advance in South African shares proved too strong a temptation for the speculators. On Thursday morning the market opened in an exceptionally strong and promising condition, but as the day wore on a disposition to snatch profits developed itself, and spread to every section of the market, occasioning a reaction. In one or two instances, however, the buoyancy was well maintained. Wemmer, and Meyer and Charlton attracted attention in the Rand department. In the former a betterment of $\frac{1}{4}$ carried the shares to 5 $\frac{1}{2}$, and the latter closed at 5 $\frac{1}{2}$. Small improvements also took place in Kleinfonteins and Modderfonteins, while Primrose, Durban, and Goldenhuis escaped the downward tendency. Cities fell to 14 $\frac{1}{2}$, Crowns to 9 $\frac{1}{2}$, Langlaagte to 4 $\frac{1}{2}$, Simmers to 7 $\frac{1}{2}$, Wolhuters to 3 $\frac{1}{2}$, Rand Mines to 8 $\frac{1}{2}$, Villages to 4 $\frac{1}{2}$, Chimes to 2 $\frac{1}{2}$, Glencairns to 34s. 6d., Paarl Central to 22s. 6d.; and Henry Nourse, Jumpers, Rietfonteins, Champ d'Or were weaker. The prevailing depression affecting the Land markets, Chartered and Bechuanaland relapsed, the former to 34s. 6d. and the latter to 13. De Beers and Jagers remained strong. Taking yesterday's indications into account the South African market has been throughout to-day rather more healthy in tone than might have been expected. There can be no doubt that there has been some considerable advance upon the week, and the general tone to-day is a fairly steady one. Crowns and Cities have gone back slightly, but Wemmers have been good and Shebas have taken a sudden jump up to 30s. buyers. The land department has been in pretty close keeping with the other sections of the market. Bechs have been strong at a good rise, while there has been a demand for African Consolidated Land and Trading Company's shares, on the official announcement that coal has been found on the property.—Risen:—Bechuanaland, 6d.; Block B, 6d.; Buffelsdoorn, 3s.; Champ d'Or, 2s. 6d.; Chartered, 6d.; City and Suburban, 25s.; Consolidated Gold Fields, 1s. 3d.; Durban Rodepoort, 2s. 6d.; East Rand, 2s.; Ferreira, 2s. 6d.; Goldenhuis Deep, 2s. 6d.; Goldenhuis (allowing for dividend), 4s.; Goldenhuis Main Reef, 1s.; Glencairn, 1s. 6d.; Gordon Diamond, 6d.; Henry Nourse, 3s. 9d.; Johannesburg Pioneer, 2s. 6d.; Jubilee (allowing for dividend), 5s. 6d.; Jumpers, 5s.; Kleinfontein, 3s. 9d.; Langlaagte, 2s. 6d.; Langlaagte Royal, 2s. 6d.; Luipaards Vlei, 6d.; May Deep, 1s. 6d.; Meyer and Charlton, 10s.; Modderfontein, 3s.; Moodies (fully paid), 6d.; Mozambique, 1s. 3d.; New Chimes, 3s. 9d.; New Croesus, 2s. 6d.; New Primrose, 2s. 6d.; Paarl Central, 3s.; Rietfontein, 1s. 6d.; Rand Mining, 10s.; Read's South Drift, 1s.; Robinson, 2s. 6d.; Salisbury, 2s. 6d.; Sheba, 2s. 6d.; South African Gold Trust, 6d.; South Simmer and Jack, 2s. 6d.; Transvaal Exploration, 2s.; United Ivy Reef, 1s. 3d.; United Langlaagte, 2s. 6d.; United Rodepoort, 2s. 6d.; Village Main Reef, 5s.; Wemmer, 2s. 6d.; Witwatersrand (Knight's), 1s.; Wolhuter (allowing for dividend), 2s.; Worcester (allowing for dividend), 2s. 6d.;—Fallen:—African Gold Recovery, 1s. 3d.; Exploration, 1s. 3d.; Exploring, 5s.; Forbes Reef, 1s.; Klerkadorp, 6d.; Main Reef, 1s. 6d.; New Jagersfontein, 5s.; Orange Free States, 5s.; North Transvaal Land (fully paid), 6d.; Pigg's Peak, 1s.; Simmer and Jack, 2s. 6d.; Spes Bona, 3s. 9d.; Transvaal Land (fully paid), 6d.

Indian and Miscellaneous Shares.

A fairly firm but rather quite tone characterised the Indian and Miscellaneous market on Monday. Small purchases were made, and it was evident that a steady and healthy condition prevailed. There was little movement to be chronicled, but what there was made distinctly for improvement. This was emphatically the case with Indians, all of which exhibited a stronger tendency. Champions and Ooregums were firmer in view of the increased outputs and the addition to the stamping power. There were depressions in Don Pedro, Tolima B, Guston and Fortuna; but, on the other hand, Brilliant Block, Day Dawn P.C., Scottish Australian, and La Yesca registered improvements. Diamond shares were extremely dull, both De Beers and Jagersfontein ruling much easier. A quiet but steady tone characterised the miscellaneous market on Tuesday. The one feature which stood out in relief against the generally stolid aspect of the department was the buying of Nundydroog, which sent the shares up to £1. Reports are to the effect that a considerable improvement has taken place in the mine. Broken Hill Proprietary were quoted $\frac{1}{4}$ higher at 24. Argentine Concessions were dealt in at 2s. 3d., while Ooregum lost $\frac{1}{4}$ at 4 $\frac{1}{2}$, and De Lamar, Don Pedro, and St. John del Rey were all depressed. Rio Tinto recovered $\frac{1}{4}$ to 14 $\frac{1}{2}$. There was a considerable accession of activity in the Miscellaneous department on Wednesday, which resulted rather in a more confident tone than in any marked difference in quotations. Attention was especially directed towards Lisbons, which carried them 3d. higher on the day. Similar improvements also took place in Balkis Eerstelings and Spitzkoppe. In the Indian market the feature was the advance in Nundydroogs, due to a general idea that good news had been received from the mine, not resolved, however, into anything very definite. Altogether, the improvement measured $\frac{1}{4}$, and support was given to the shares from very good quarters. The activity in these shares was all the more noticeable against the dullness which characterised other Indian shares. Depression took place in Mysore Gold, Ooregum Ordinary, Ooregum Preference, and Champion Reef to the extent of $\frac{1}{4}$. Tolima A and B were both easier, and were $\frac{1}{4}$ lower at 7 $\frac{1}{2}$ and 6 $\frac{1}{2}$ respectively. Elkhorn and De Lamar were each 6d. better at 12s. 6d. and 17s. 6d. Among copper shares, Cape Copper alone altered, the price being $\frac{1}{4}$ higher at 14. Throughout Thursday business was very quiet in this market. Wentworth (Priority and Ordinary), Ooregums, and Broken Hill Props. were all weaker. On the other hand, small advances took place in Harquahala, De Lamar, Montana, and New Queen. Among copper shares, Rio Tinto recovered $\frac{1}{4}$ to 14 $\frac{1}{2}$. The Indian and Miscellaneous department has been very quiet throughout the day, the exception being in favour of Nundydroogs, which remained strong at a rise of 5s. on the week.—Risen: Brilliant Block, 1s. 3d.; Broken Hill Proprietary, 2s. 3d. (allowing for dividend); De Lamar, 6d.; Elkhorn, 6d.; Golden Feed, 6d.; Mason and Barry, 2s. 6d.; Montana, 6d.; New

Guston, 2s.; Nundydroog, 5s.; Pahang Corporation, 6d.; Richmond, 1s.; Waihi Gold, 2s. 6d.—Fallen: Aladdin, 1s. 3d.; Australian Broken Hill, 9d.; Craven's Caledonia, 9d.; Day Dawn, 6d.; Don Pedro, 6d.; Fortuna, 2s. 6d.; Frontino, 1s.; Gold Fields of Mysore, 1s.; Gravel Gold, 6d.; Harquahala, 4s.; Mosman, 6d.; Mount Maid, 6d.; Ooregum, 1s. 3d.; Poorman, 6d.; Rio Tinto, 6d. (allowing for dividend); Tolima B, 5s.; Wentworth Proprietary, 2s. 6d.; ditto Ordinary, 6d.

SETTLING DAYS.

| | | |
|-----------------------|-------|--------------------|
| (Ticket Days.) | JUNE. | (Account Days.) |
| Wednesday, June 13. | | Thursday, June 14. |
| Wednesday, June 27. | | Thursday, June 28. |
| CONSOLS SETTLING DAY. | | |
| Wednesday, July 4. | | |

MINING IN CORNWALL

AND DEVON:

NOTES ON WESTERN MINING, EDITORIAL AND OTHERWISE.

THERE is as yet scarcely a rift in the cloud which has so long overhung the mining industry in the west, nor does there seem to be any immediate prospect of an improvement. In the share market there is absolutely nothing doing. Shares all round are neglected, and the prices generally are lower. Adventurers in the calling mines are feeling the pinch acutely, and it is doubtful how much longer the majority will be able to continue to meet the demands made upon them. In those mines which are still able to show a profit, the dividends have been reduced to a minimum, so that what little help has usually come from this source has almost completely failed them, and there does not seem to be any immediate prospect of increased dividends in any of the mines. Indeed, if any change takes place it is rather likely to be for the worse than for the better. Those interested in the industry might, indeed, complain that they had more than their share of hard luck, for such an occurrence as the "run" at Dolcoath, which at any time would be serious, is naturally more prejudicial at a juncture like the present, when the prosperity of the premier mine is one means of tiding them over their temporary difficulties.

THE West Kitty shareholders have done the only and right thing, and what is significant, they have done it unanimously. It would have been an extraordinary coincidence if they had refused to raise this additional capital to develop what is likely to turn out a new and promising mine. As a matter of fact, refusal was never anticipated. If any difference of opinion existed it was expected to be confined solely to the method of raising the money. That they have adopted the best—indeed, the only practical means—goes without saying. Naturally, the first thing that would strike an onlooker would be as to the whereabouts of the reserve fund, and for what purpose it was employed. Strange to say, however, this company has no reserve fund. Who is to blame for this error of judgment? Mr. Reynolds assures us it is not the committee, but that the latter are acting only in accordance with the dictum of the shareholders. The absence of a reserve fund does not strike us as at all wise. At the present time it would have been found extremely useful, and would have obviated the necessity of the shareholders dipping their hands into their pockets. They have, however, to pay the penalty of their folly. We hope it will teach them a wise lesson; that they will recall their dictum; and that they will, at the earliest opportunity, give instructions for the provision of a reserve fund. Nothing could have been more clear and unanswerable than Mr. Reynolds' speech at Thursday's meeting. It placed the whole thing in a nutshell, and no doubt generated the unanimity of approval which characterised the meeting. We hope to see here a repetition of the history of Wheel Grenville. If this really come to pass—and at present there is no reason to doubt that it will—then the shareholders of West Kitty are to be envied.

CAPTAIN FRANCIS OATS, one of the directors in De Beers Mine, is expected in England this week, after an absence in South Africa of several years. He has a very large interest in several of the Cornish mines, particularly Wheal Bassett, where he is the most considerable shareholder. The committee of this mine have been anticipating his return, and the discussion of many matters connected with the development of the mine have been allowed to stand over, pending the time when he will be present to give an opinion upon them. There are some shareholders who favour the adoption of a policy of more vigorous working, especially advocating the employment of additional boring machinery. The question of a new shaft is also one which will have to be thrashed out sooner or later, but the shareholders are hardly in a position to discuss the matter at present, because of the difficulty of deciding where it should be placed. The lode in the bottom shows signs of having been heaved south, and the executive are not likely to recommend the sinking of a new shaft until they have thoroughly proved the lode.

A good deal of feeling has been aroused among Cornish mine managers by the strictures upon their methods contained in the annual report of Mr. Martin. It is pointed out that the Inspector altogether fails to take into account the many difficulties in regard to capital, the attitude of certain lords, and other matters with which the industry is handicapped. It is felt that Mr. Martin's experience has been mainly in the colliery districts, and that he scarcely yet realises the special disadvantages under which Cornwall labours compared with those parts of the country with which he is better acquainted.

MUCH regret has been expressed at the retirement from the committee of Wheal Agar of Mr. Michael Henry Williams, who had been associated with the management for several years. We understand that the reason of the retirement is to be found in the report of the proceedings at a recent meeting of the adventurers, held in London, at which exception was taken to the presence on the committee of a merchant, from whom materials were purchased. The question is one which has often been discussed both in Cornwall and London, and rather than give rise to any friction Mr. Williams has severed his connection with the committee. He will be a distinct loss to the executive of the mine, where his long experience of the whole district and his large interest in most of the mines in the immediate neighbourhood, have been of invaluable service to his colleagues.

CORNISH miners continue to leave their native county in large numbers. Last week a contingent went from Chacewater en route for the Cape. There are many parishes in Cornwall, once busy mining centres, which now depend almost entirely on remittances which are weekly received from abroad.

THE METAL MARKETS.

LONDON METAL MARKET

THE METAL MARKET—LONDON, JUNE 1.

COPPER this week is lower all round, and the fall has been still further accentuated by the reported heavy sale of Lake copper in America, at 9 cents per pound, and also by the increase in the visible supplies. G. M. B.'s opened on Monday at £39 6s. 3d. s.c., but on Wednesday business took place at £39 3s. c. and £39 5s. to £39 7s. 6d. three months. On Thursday there was a rally to £39 1s. 3d., but this slight advance was lost again on Friday, when the two adverse features above-named appeared, and values fell quickly to £38 13s. 9d. The transactions have averaged about 350 tons per day, and the close is flat at £38 13s. 9d. to £38 15s. s.c. and £38 18s. 9d. to £39 three months. Low as these values are, they are still much too high in relation to refined sorts. In furnace material the sale is advised of 50 tons Portuguese precipitate at 7s. 10½d. per unit.

Tin
was firm on the opening day, and £72 5s. was paid for Straits for delivery on June 1. Silver has receded slightly, and this, combined with somewhat persistent sales of Straits, though only of moderate quantities, has been followed by a gradual relapse in prices; £73 and £72 2s. 6d. were done for s.o. on Tuesday, £71 15s. on Wednesday, £71 7s. 6d. on Thursday, and £71 5s. to-day. The market closes flat at £71 5s. to £71 7s. 6d. s.o. and £71 12s. 6d. to £71 15s. three months. Billiton opened at 43 fl. s.c., rose $\frac{1}{2}$ fl., and closes as it opened.

Pig Iron.
Scotch shipments last week were 5207 tons, or 1949 tons less than in the same period of last year. In the Glasgow market, Scotch opened at 41s. 5¹/₂d. a.c., and touched 41s. 3¹/₄d. on Tuesday. During Wednesday and Thursday a recovery was made to 41s. 10¹/₄d., and to-night the close is steady at 41s. 7³/₄d. sellers. Hematite is quoted 43s. 10¹/₄d. and Middlebrook 35s. 5d.

Lead
continues very steady at \$9 2s. 16d. to \$9 3s. 9d. soft foreign, and \$9 5s. to \$9 6s. 3d. English.

Spelter
closes quiet at £15 13s. 9d. ordinaries and £15 13s. 9d. to £15 16s. 3d. specials, without any special feature.

Antimony
has given way in value, the closing quotation being £32 10s. to £33.

Quicksilver
is still quoted £6 for firsts and £5 19s. for seconds.

The following are to-night's (June 1) prices of metals:—

| | | Copper. | | £ s. d. | | s. d. | |
|------------------------|---------------------------------|---------|-----|---------|-----|-------|---------|
| Tough cake and ingot | 200 | 250 | 270 | 270 | 00 | 00 | 91 7 6 |
| Best selected | 200 | 220 | 220 | 000 | 000 | 000 | 91 7 0 |
| Sheets and sheathing | 200 | 220 | 220 | 000 | 000 | 000 | 90 10 0 |
| Flat bottoms | 200 | 220 | 220 | 000 | 000 | 000 | 90 10 0 |
| Chill bars | 200 | 220 | 220 | 000 | 000 | 000 | 90 10 0 |
| Good merchantable, | { spot, & 3 months respectively | | | 32 13 | 00 | 00 | 90 10 0 |
| Copper tubes, seamless | 200 | 220 | 220 | 000 | 000 | 000 | 90 10 0 |

[illegible]

| BULL'S METAL... | | Fasteners (Vivian)... | | | |
|--|-----|-----------------------|---------|---|-----|
| Ingot... | ... | ... | per lb. | 0 | 5% |
| Ordinary sheets, plates, bolts and bars... | ... | ... | ... | 0 | 5% |
| Screw bolts and nuts... | ... | ... | ... | 0 | 5% |
| Pump rods, plate... | ... | ... | ... | 0 | 5% |
| finished | ... | ... | ... | 0 | 10% |
| DURA METAL: No. 4 (per ton) | ... | ... | ... | 0 | 10% |
| Sheets and plates (per lb.) | ... | ... | ... | 0 | 5% |
| Bars, round, square, flat (per lb.) | ... | ... | ... | 0 | 5% |
| Hinges (per lb.) | ... | ... | ... | 0 | 5% |

| | | Tin. | | | |
|--|-----|------|---------|----|------|
| English, Ingots, f.o.b. | ... | ... | ... | 75 | 0 0 |
| do bars | ... | ... | ... | 75 | 0 0 |
| do refined | ... | ... | ... | 75 | 0 0 |
| do spot and 3 months respectively | ... | ... | ... | 71 | 5 0 |
| Australian spot, and three months respectively | ... | ... | ... | 71 | 15 0 |
| do (in Holland) | ... | ... | ... | 75 | 0 0 |
| Banana | ... | ... | ... | 75 | 0 0 |
| Tin Plates: Charcoal best quality | ... | ... | per box | 0 | 11 3 |
| do ordinary | ... | ... | ... | 0 | 11 3 |
| do Coke, best quality | ... | ... | ... | 0 | 10 9 |

| These prices of triplicates are f.o.b. at Swansea: at Liverpool 6d. per box more. | | ordinary... | | 18 6 | | 10 6 | |
|---|-----|-------------|-----|--------|--------|--------|--------|
| | | Iron. | | | | | |
| Fig. 6, M.M. f.o.b. Clyde, spot | 000 | 000 | 000 | 000000 | 000000 | 000000 | 000000 |
| No. 1 Scotch pig, No. 1 Gatharris | 000 | 000 | 000 | 000000 | 000000 | 000000 | 000000 |
| Coltness | 000 | 000 | 000 | 000000 | 000000 | 000000 | 000000 |
| Clyde | 000 | 000 | 000 | 000000 | 000000 | 000000 | 000000 |
| Govan | 000 | 000 | 000 | 000000 | 000000 | 000000 | 000000 |
| Barra, Welsh, f.o.b. Wales | 000 | 000 | 000 | 000000 | 000000 | 000000 | 000000 |
| Plates | 000 | 000 | 000 | 000000 | 000000 | 000000 | 000000 |

| | | | | | | |
|-------------------------------|--------------------------------------|-----|-----|-----|-----|-----|
| Burn, Staffordshire, at works | ... | ... | ... | ... | ... | ... |
| Grooves | ... | ... | ... | ... | ... | ... |
| Plates | ... | ... | ... | ... | ... | ... |
| Hoops | ... | ... | ... | ... | ... | ... |
| Ship plates, Middleborough | ... | ... | ... | ... | ... | ... |
| Sizes: English spring- | nominal | ... | ... | ... | ... | ... |
| " " | cast | ... | ... | ... | ... | ... |
| " " | Nails at works, according to section | ... | ... | ... | ... | ... |
| Lead. | | | | | | |
| Spanish or soft foreign | ... | ... | ... | ... | ... | ... |

[illegible]

| | | | | | | | |
|--|----|--|--|--------------|--------|----------|-------------|
| Silver Zinc | | | | | \$8 50 | | \$16 75 |
| Antimony | | | | | | \$2 10 0 | \$3 0 0 |
| Picks, 75 lbs. warrants Ore, c.i.f., U.K. ports | | | | | | \$ 0 0 | \$ 1 00 |
| 1st quality, \$9 per cent, and upwards | | | | | \$ 0 0 | \$10 00 | \$ 0 12 1/2 |
| " " 47 per cent, to 50 percent. | | | | | \$ 0 0 | \$ 9 00 | \$ 0 10 0 |
| 2nd " | 40 | | | 47 per cent. | | \$ 0 0 | \$ 8 00 |
| Arsenicum, | | | | | | | \$ 1 10 |

93-95% per cent. (guaranteed 93 per cent. min.) in ingots (1 cwt. max) 0 1 10
do do do (1 ton lots) 0 1 10

Nickel.

95-99 per cent. guaranteed ... 0 1 7 1/2 ... 0 1 8 1/2

FORTHCOMING MEETINGS.

... .. Office of Mining, Railways and

"* We shall be obliged if Secretaries or other Officers of Annual Meetings of other Companies will be good enough to advise us as early as possible of the date, time and place of their forthcoming meetings - whether ordinary, semi-annual, annual, general or extraordinary, confirmatory or adjourned - in order that particulars may be announced for the benefit of our subscribers and more particularly our country readers. Business shares reports and other matter to be submitted for such meetings should, where possible, accompany the intimation of the meetings and

| Name of Company. | Date. | Nature of Meeting. | Place. | Time. |
|-------------------------------|--------|--------------------|-------------|---------|
| Mines Trust (Limited)..... | June 5 | Ex. General | Windsor Ho. | 10 a.m. |
| Stella Development Co..... | June 5 | General | Windsor Ho. | 11 a.m. |
| Montana Mining Company..... | June 5 | General | Windsor Ho. | 11 a.m. |
| Granite Mining Co..... | June 7 | General | Windsor Ho. | 11 a.m. |
| Argentine Oil, West. Ind. Co. | June 7 | General | Windsor Ho. | 2 p.m. |
| Maxima Mineral Salt Co., Inc. | June 7 | General | Windsor Ho. | 2 p.m. |

| EUROPEAN MINES. | | | | | | | | | | |
|---------------------------|----|---------|---------|---------|-------|-----------------|---------|-----------|----------------|------------------------|
| Alamellis | L | 3/6 | 3/6 | 3/6 | 2 0 | -/3 Sept. '92 | 2 0 0 | 35,0 0 | Spain | 6, Queen-street-place |
| Argentina | C | — | — | — | 1 0 | — | 1 0 0 | 133,165 | Corcia | 16, Philip-lane. |
| English Cr. Spelter | — | — | — | — | 1 0 | 5 1/2 Dec. '92 | 1 0 0 | 24,000 | Lombardy | 9, Queen-street-place |
| Fortuna | L | 3/6 | 3/6 | 3/6 | 2 0 | -/8 Sept. '92 | 2 0 0 | 25,808 | Spain | 8, Queen-street-place |
| Libiola | C | 2 3/4 | 3 3/4 | 3 3/4 | 5 0 | 5 1/2 Mar. '94 | 5 0 0 | 80,400 | Italy | Dashwood Ho., E.C. |
| Minera | L | 2 3/4 | 3 | 3 | 3 0 | 4 1/2 May, '94 | 3 0 0 | 14,998 | Spain | 6, Queen-street-place |
| Marbella | I | 54/- | 58/- | 58/- | 10 0 | 8/- Mar. '93 | 10 0 0 | 25,000 | Spain | 73, Queen Victoria-st. |
| Mason & Barry... | C | 2 3/4 | 3 3/4 | 2 3/4 | 5 0 | 2/- May. '94 | 5 0 0 | 125,172 | Portugal | 87, Cannon-street. |
| Oscar | G | — | — | — | 5 0 | — | 5 0 0 | 117,240 | Norway | 64, Austin Friars. |
| Pontarica | G | 2/- | 2/8 | 2/8 | 3 0 | — | 3 0 0 | 87,759 | France | 6-7, Queen-street-pl. |
| Portuguese | L | — | — | — | 20 0 | 11/5 Dec. '92 | 20 0 0 | 14,000 | Italy | 6-7, Queen-street-pl. |
| Ro Tinto | C | 148/- | 148/- | 413/- | 10 0 | 7/- May. '94 | 10 0 0 | 325,000 | Spain | 32, St. Swithin's-lane |
| Soc. (Mort. Bonds) | I | 113 3/4 | 104 1/4 | 104 1/4 | 100 0 | 5 1/2 Apr. '94 | 100 0 0 | 2,159,960 | Spain | 20, St. Swithin's-lane |
| Soc. (Ind. do.) | I | 101 1/2 | 102 1/2 | 102 1/2 | 100 0 | 5 1/2 Apr. '94 | 100 0 0 | 1,127,180 | Spain | 20, St. Swithin's-lane |
| Spanish | AQ | 7/- | 9/- | 9/- | 1 0 | — | 0 19 0 | 95,000 | Serbia | 120, Bishopsgt-st. Wn. |
| Tharwa | C | 4 3/4 | 4 3/4 | 4 3/4 | 8 0 | 12 1/2 Mar. '94 | 8 0 0 | 625,000 | Spain | Glasgow |
| Van der Fransen Pre. | — | — | — | — | 10 0 | 7 1/2 Mar. '94 | 10 0 0 | 5,450 | Germany | Walbrook Ho., E.C. |

"THE MINING JOURNAL" SHARE LIST (African Mines continued).

| Name. | Closing Price, June 1, 1894. | Closing Price, May 25, 1894. | Par. | Latest Dividend. | Called up Per Share. | Shares Issued. | Situation of Mine. | Head Office. | Name. | Closing Price, June 1, 1894. | Closing Price, May 25, 1894. | Par. | Latest Dividend. | Called up Per Share. | Shares Issued. | Situation of Mine. | Head Office. |
|----------------------|------------------------------|------------------------------|------|------------------|----------------------|----------------|--------------------|-------------------------|------------------------|------------------------------|------------------------------|-------|------------------|----------------------|----------------|--------------------|-------------------------|
| Harlot (New) ...G | 4 1/4 | 4 1/4 | 1 0 | — | 1 0 | 185,000 | Witwatersd. | 1, Crosby Square, I | Otto's Kopje ...D | 1/3 | 1/3 | 1 0 | — | 1 0 | 437,883 | Kimberley | 112, Cannon-st., E.O. |
| Joe's Luck ...G | 1/8 | 1/8 | 1 0 | — | 1 0 | 57,404 | De Kaap | 11, Queen Vic-st. | Paarl Central ...G | 22/2 | 22/2 | 1 0 | — | 1 0 | 128,750 | Transvaal | 29-30, Hol. Vis., E.O. |
| Johannesburg Fur | 3 1/4 | 3 1/4 | 1 0 | 18 1/2 Nov. '93 | 1 0 | 21,000 | Witwatersd. | 1, Lombard-st. | Figge Peak, New G | 2/6 | 3/4 | 1 0 | — | 1 0 | 128,750 | Swaziland | 8, Queen-street-place |
| Jubilee ...G | 5 | 5 1/4 | 1 0 | 30 1/2 Apr. '94 | 1 0 | 30,000 | Witwatersd. | 8, Old Jewry, I | Potchefstroom ...G | 2/6 | 2/3 | 1 0 | — | 1 0 | 128,750 | Potchefstroom | 18, Bury-st., E.O. |
| Jumpers ...G | 4 1/4 | 4 1/4 | 1 0 | 10 1/2 Jan. '94 | 1 0 | 100,000 | Witwatersd. | 29, Holborn Viaduct, I | Princess Estate G | 1/4 | 1/4 | 1 0 | — | 1 0 | 72,046 | Witwatersd. | 23, Cornhill, E.O. |
| Kimberley ...G | 1/4 | 1/4 | 1 0 | — | 1 0 | 98,872 | Kimberley | 19, Finsbury circus. | Randfontein ...G | 16/6 | 17/6 | 1 0 | — | 1 0 | 1,916,500 | Witwatersd. | 59, Holborn Viaduct, I |
| Klatsfontein (N)G | 1 1/4 | 1 1/4 | 1 0 | — | 1 0 | 150,000 | Transvaal | 8, Old Jewry. | Read's Drift ...D | 9/6 | 10/6 | 1 0 | — | 1 0 | 5,000 | Transvaal | 19, Finsbury circus. |
| Klatsfontein (S)G | 1/6 | 2/8 | 1 0 | — | 1 0 | 150,000 | Transvaal | 110, Cannon-street. | Robinson ...G | 6 1/2 | 6 1/2 | 5 0 | 1 1/2 June '93 | 5 0 | 543,750 | Transvaal | 55, Holborn Viaduct, I |
| Knight ...G | 15/6 | 16/8 | 1 0 | — | 1 0 | 250,000 | Witwatersd. | 19, Bury-street, E.O. | Rodepoort Un. G | 2 1/2 | 2 1/2 | 2 1/2 | — | 1 0 | 100,000 | Witwatersd. | Warnford-court, I |
| Langlaagte Est. G | 4 1/4 | 4 1/4 | 1 0 | 12 1/2 Mar. '94 | 1 0 | 467,000 | Witwatersd. | 59, Holborn Viaduct, I | St. Augustine ...D | 2 1/2 | 2 1/2 | 2 1/2 | — | 1 0 | 465,000 | Griqualand W | 30-1, St. Swithin's-ln |
| Do. Royal | 3/4 | 3/4 | 1 0 | 5 1/2 Sept. '93 | 1 0 | 100,000 | Witwatersd. | 2, Drapers-gardens, I | Salisbury New ...G | 2 1/2 | 2 1/2 | 2 1/2 | — | 1 0 | 93,000 | Witwatersd. | 1, Crosby-square, I |
| Liebo-Berlyn ...G | 3/4 | 3/4 | 1 0 | — | 1 0 | 285,233 | Lydenburg | 110, Cannon-street. | Sheba ...G | 28/2 | 29/2 | 2 1/2 | — | 1 0 | 614,450 | Lydenburg | 55, Gracechurch-st. |
| Guilpards Vlei Est. | 11/2 | 12/2 | 1 0 | 6 1/2 Mar. '90 | 1 0 | 219,033 | Witwatersd. | Warford-court, I | Sheld ...G | 3/4 | 3/4 | 1 0 | — | 1 0 | 625,000 | South Africa | 4, Sun Court, E.O. |
| Do. do. | 3/4 | 3/4 | 1 0 | — | 1 0 | 250,000 | Witwatersd. | 8, Old Jewry. | Simmer & Jack ...G | 7 | 7 1/2 | 7 1/2 | — | 1 0 | 85,000 | Witwatersd. | 33, Cornhill. |
| Main Reef (New)G | 9/1 | 10/1 | 1 0 | — | 1 0 | 300,000 | Witwatersd. | 8, Old Jewry. | S.A. Gold Trust ...G | 16/6 | 17/6 | 1 0 | 10 1/2 Apr. '93 | 1 0 | 220,000 | South Africa | 8, Old Jewry. |
| May Consol. ...G | 9/1 | 10/1 | 1 0 | — | 1 0 | 430,000 | Witwatersd. | 4, Lothbury, I. | Splitkop (New)G | 2/6 | 3/4 | 3/4 | — | 1 0 | 144,531 | Lydenburg | 15, Bishopsgate-st, Wt. |
| May Deep Level G | 9/1 | 10/1 | 1 0 | — | 1 0 | 144,000 | Witwatersd. | 33, Cornhill, E.O. | Stanhope ...G | 1 1/2 | 1 1/2 | 1 0 | 50 1/2 May '93 | 1 0 | 34,000 | Witwatersd. | 1, Crosby Square, I |
| Metropolitan (N)G | 5 1/2 | 5 1/2 | 1 0 | — | 1 0 | 76,000 | Witwatersd. | 1, Crosby Square, I | Sutherland R. ...G | 4/6 | 4/6 | 5/6 | — | 1 0 | 220,000 | Transvaal | 3, Budge-row, E.O. |
| Meyer & Charl. ...G | 5 1/2 | 5 1/2 | 1 0 | 25 1/2 Dec. '93 | 1 0 | 71,857 | Witwatersd. | Warford-court, I | Tontonia ...G | 11/9 | 12/3 | 12/3 | — | 1 0 | 96,000 | Witwatersd. | 8, Old Jewry. |
| Moffatfontein G | 14/8 | 15/8 | 1 0 | — | 1 0 | 200,000 | Witwatersd. | Warford-court, I | Trans. Coal Trust ...G | 9/1 | 10/1 | 10/1 | — | 1 0 | 439,385 | Transvaal | Broad-t. House, E.O. |
| Moodies G.E. ...G | 7/8 | 8/8 | 1 0 | — | 1 0 | 120,000 | De Kaap | 8, Old Jewry, I | Trans. Est. & Dev. G | 9/1 | 10/1 | 10/1 | — | 1 0 | 285,700 | Transvaal | 76, Old Broad-st. E.O. |
| Moodies (S.E.)-p.G | 4/4 | 5/4 | 1 0 | — | 1 0 | 120,000 | Namaqualand | 8, Old Jewry. | Trans. Gold ...G | 2 | 2 1/2 | 2 1/2 | — | 1 0 | 250,000 | Transvaal | 33, Cornhill. |
| Namaqualand ...G | 2 1/4 | 2 1/4 | 1 0 | 2/6 July '91 | 1 0 | 70,000 | Witwatersd. | 8, Old Jewry, E.O. | Trans. Land (S.E.)G | 6/8 | 7/8 | 7/8 | — | 1 0 | 169,399 | Witwatersd. | 110, Cannon-street |
| New Chinese ...G | 1 1/4 | 1 1/4 | 1 0 | — | 1 0 | 100,000 | Lydenburg | 29-31, Holborn Viaduct. | Treasury ...G | 3/4 | 3/4 | 3/4 | — | 1 0 | 45,070 | Transvaal | 23, St. Swithin's-ln. |
| New Clever Estate | 1 1/4 | 1 1/4 | 1 0 | — | 1 0 | 100,000 | Langlaagte | 4, Bishopsgate-st. Wt. | Un. Ivy Reef ...G | 10/6 | 17/8 | 17/8 | — | 1 0 | 100,000 | Witwatersd. | 1, Crosby-square, I |
| New Cronus ...G | 1 1/4 | 1 1/4 | 1 0 | 5 1/2 Aug. '92 | 1 0 | 100,000 | Transvaal | 5, Cothall-buildings | Van Ryn ...G | 9/6 | 9/6 | 11/1 | — | 1 0 | 99,810 | De Kaap | Portland House, E.O. |
| New Jagersf. ...D | 15 | 15 1/2 | 1 0 | — | 1 0 | 100,000 | Witwatersd. | 105, Hatton Garden. | Victory Hill ...G | 4 1/4 | 4 1/4 | 4 1/4 | — | 1 0 | 132,000 | Transvaal | 28, Budge-row, E.O. |
| New Louis D'Or. ...G | 4 1/4 | 4 1/4 | 1 0 | — | 1 0 | 230,000 | Witwatersd. | 2, Drapers-gardens. | Village Main Reef | 3/4 | 3/4 | 3/4 | — | 1 0 | 55,000 | Witwatersd. | 19, Bury-st., E.O. |
| New Primrose ...G | 1 1/4 | 1 1/4 | 1 0 | 4/7 July '93 | 1 0 | 100,000 | Witwatersd. | Warford-court, E.O. | Virginia (New) ...G | 3 1/2 | 3 1/2 | 3 1/2 | — | 1 0 | 258,000 | Witwatersd. | 19, Bury-st., E.O. |
| New Rietfontein G | 2 1/4 | 2 1/4 | 1 0 | — | 1 0 | 160,000 | Witwatersd. | 1, Crosby-square. | Wenmar ...G | 14/6 | 15/6 | 15/6 | — | 1 0 | 102,000 | Witwatersd. | Warford-court, I |
| Nigel ...G | 2 1/4 | 2 1/4 | 1 0 | 10 1/2 Mar. '94 | 1 0 | 160,000 | Lydenburg | 8, Old Jewry. | Witwatersd. ...G | 3 | 3 1/2 | 3 1/2 | — | 1 0 | 102,000 | Transvaal | 5, Cothall-buildings |
| Southgate E. G. | — | — | 1 0 | — | 1 0 | — | — | — | Wolterand ...G | 6/1 | 7/1 | 7/1 | — | 1 0 | 102,000 | Transvaal | 8, Old Jewry, I |
| Oceana ...G | 1 1/2 | 2 1/4 | 1 0 | 25/11 Nov. '93 | 1 0 | 150,000 | Transvaal | 4, Sun Court, E.O. | Worcester ...G | 2 1/2 | 2 1/2 | 2 1/2 | — | 1 0 | 90,727 | Witwatersd. | 8, Old Jewry, I |
| S. Ophir Concess. | — | — | 1 0 | — | 1 0 | 18,857 | R. Coast Africa | 31, Lombard-street. | Zimbabwe Explora | 2 1/2 | 2 1/2 | 2 1/2 | — | 1 0 | 45,000 | Transvaal | 13, George-st., E.O. |
| Orange F.S.E. ...D | 4 1/4 | 4 1/4 | 1 0 | — | 1 0 | 284,000 | Orange F. State | 10, Moorgate-street. | | | | | | | | | |

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (May 31) as follows:—The mining market continues dull and inactive on tin becoming weaker. Prices have slightly receded, and business mostly confined to the settlement. Blue Hills enquired for on good improvements at the 60 and 80 fathom levels. Closing prices:—Blue Hills, 1/2 to 3/4; Carn Brea, 10 to 10 1/2; Cook's Kitchen, 1/2 to 3/4; Devon Consols, 18s. 6d. to 20s.; Dolcoath, 70 to 70 1/2; East Pool, 10 to 10 1/2; Killfret, 3 1/2 to 3 3/4; Phoenix United, 1 1/2 to 1 3/4; Polberr, 1 to 1 1/4; South Crofty, 1 1/2 to 1 3/4; South Frances, 1 to 1 1/4; Tincroft, 12 1/2 to 13 1/2; West Frances, 2 1/2 to 2 3/4; West Kitty, 6 to 6 1/2; Wheal Agar, 2 1/2 to 2 3/4; Wheal Bassett, 2 1/2 to 2 3/4; Wheal Grenville, 17 1/2 to 17 3/4; Wheal Kitty, 3s. 6d. to 10s.

—Messrs. ABBOTT AND WICKETT, Stock and Share Brokers, and Mining Share Dealers, Redruth, write under date of Thursday, May 31:—A quiet market this week, with but a very limited business doing. Blue Hills enquired for at 10s. in consequence of an improvement at the bottom. The run in Dolcoath has not yet been cleared, and there are sellers at 70. Quotations herewith (four o'clock):—Blue Hills, 1/2 to 3/4; Carn Brea, 9 1/2 to 10 1/2; Cook's Kitchen, 1/2 to 3/4; Dolcoath, 70 to 71; East Pool, 10 to 10 1/2; Killfret, 3 1/2 to 3 3/4; Phoenix, 1s. to 3s.; Polberr, 1 1/2 to 1 3/4; South Crofty, 1 1/2 to 1 3/4; South Frances, 1 1/2 to 1 3/4; Tincroft, 12 1/2 to 13 1/2; West Frances, 2 1/2 to 2 3/4; West Kitty, 5 1/2 to 6 1/2; Wheal Agar, 2 1/2 to 2 3/4; Wheal Bassett, 2 1/2 to 2 3/4; Wheal Grenville, 17 to 17 1/2; Wheal Kitty, 3 to 4. Tin, 7 1/2.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write, May 31, 1894 (noon):—The tone of the markets during the past week has been generally better than for some weeks past, and a fair amount of business is reported in the aggregate. Home rails have the best record in changes of quotations, advances herein being uncontradicted save for the Scotch Deferred stock, these receding on fear of strikes in the Scotch coal districts. These fears, however, are not altogether general, there being some hopes that a cessation of work may be avoided. The heavy lines are all distinctly better, and many of the Deferred stocks, too, show good advances:—The following are prominent, viz.:—Lancashire and Yorkshire, 2 1/2; Midland, 2 1/2; South Eastern, A, 2 1/2; Sheffield, A, 1 1/2; Great Northern, A, 1 1/2; Metropolitan District, 1 1/2; and Chatham, 1 1/2, besides several others fractionally higher. Caledonian undivided stock remains with an advance of 1, notwithstanding that on the above-named influence the Deferred is down 1, and North British New Ordinary down 1/2 on the week. In Canadian some fluctuations have occurred, the result on balance being that Pacifics are 1/2 down, but Trunk issues are all higher. Guaranteed, 1 1/2; First Preference, 1 1/2; Second Preference, 1 1/2; Third Preference, 1 1/2; and Ordinary 1 1/2. Mexican railways neglected as regards business, but quotations are altered as follows:—Ordinary 1 1/2, First Preference 1 1/2, and Second Preference 1 1/2, all higher. Americans have had several and here and there sharp oscillations, and though declines still predominate they are not generally of such amount as recently we have had to notice. When an upward move has been made it has at times been pronounced but short lived, "bear" operators soon getting hold again, and forcing prices back again. These movements have occurred chiefly on the other side, but have had some reflections here, leaving prices as compared with a week ago with a few advances, but more declines for the week. The advances, though small in amount, are worth noting, owing to the recent movements having been almost without exception all on the downward side. Higher: New York Central 3 1/2, Readings 3 1/2 to 3 3/4, Ontario 3 1/2. Lower: Atchafalpa ordinary 3 1/2, ditto Income 3 1/2, Denver preferred 3 1/2 to 3 3/4, Erie 3 1/2, Louisville 3 1/2, Union Pacific 3 1/2, Norfolk preferred 3 1/2, and Denver ordinary 3 1/2, besides a few others in small fractions. Consols mark a fresh advance of distinct amount. The rise on the week is 1/2, and brings them to a price fully up to if not beyond the best touched since conversion. Colonial Government Bonds, &c., furnish a long list of improved quotations, without any showing decline. New South Wales Inscribed 1 1/2, Canada Registered 1, Victoria Inscribed 1, Cape of Good Hope Registered 1, ditto Inscribed 1, and New Zealand Inscribed, Queensland Inscribed, and South Australia Registered 1 each higher. A similar record is found in Home Corporation stocks and bonds, though here the changes are fewer. Higher, Liverpool 3 1/2 per cent, 2, Manchester 3 per cent, 1 1/2, ditto (redeemable 1941) 1 1/2, and Glasgow 3 1/2 per cent, 1 1/2. With the exception of Mexican 6 per cent, which is 1/2 down, all the changes, too, on foreigners are in favour of holders. They are as follows, viz.:—Brazilian Four and a Half per Cent, 2; Ditto Four per Cent, 1 1/2; Argentine Six per Cent, 1 to 2; ditto, Five per Cent, 1 1/2; Turkish 1884, 1 1/2; Uruguay Three and a Half per Cent, 2 1/2 (in the last two days); Italian Rentes, 1 1/2; Spanish Four per Cent, 1 1/2; and Turkish (Group 4), 1 1/2, all higher. The several sections of the miscellaneous markets produced but meagre business up to the commencement of business for the new time, but a little more has been doing during the past day or two. The total of the transactions, however, not more than moderate. Manchester Ship Canals have been a bit of a feature during a few days of the week, viewed from both sides. Quotations have come under revision in a fair number of instances, but the consequent changes are not of much moment as regards amount.

BANKS change hands to a fair extent and prices are well maintained.—Higher: Manchester and County, 1/2; Imperial Ottoman, 1/2; and Consolidated, 1/2.—Lower: Parr's, 1/2.

INSURANCE.—But a small number of transactions. Changes on quotations irregular.—Higher: British and Foreign Marine, 1/2; Commercial Union, 1/2; Globe Accident, 1/2; and Lancashire, 1 1/2.—Lower: L. ndon and Lancashire, 1/2; Palatine, 1-16 to 1/8; Royal, 1/2; and Sea, 1/2.

COAL, IRON, &c., very quiet. Higher, Earl's Shipbuilding, 1 1/2; Dorman Longs, 1/2; and Sheepbridge A, 1/2. Lower: Bolckows, 1 1/2 paid, 1-16.

MINES.—Mason and Barry, 1/2 up. De Beers 1/2, Tintos 1/2, and Oregum pref. 1/2 down.

COTTON SPINNING, &c.—No improvement at all to report. Less business (if possible) is publicly reported, and some private dealings, where they leak out, are at very low prices. Where values get tested at all decline is all there is to notice.

MISCELLANEOUS.—Allsopps have kicked about somewhat wildly again, with balance rise on the week of 2 1/2; Guinness, too, are 4 up, and Manchester Brewery ordinary are 1-16 higher. Eastmans have improved 1/2. Rochdale Canal have recovered to the extent of 1/2 per share, and Suez Canal are 1/2 up. In Telegraphs, Anglo issues are lower, the preference 2, ordinary 1 1/2, and deferred 1/2. Manchester Ship Canals at the beginning of the week were heavily pressed, and fell fully 5s., one marking being down to 2 3-16 for ordinary. Yesterday, beginning at 2 3-16 to 1/2, they rapidly advanced to 2 1/2 to 3/4, and were done inside these figures, but soon fell away again to 2 1/2 to 3/4, at about which price they open this morning. The preference have moved in a similar manner almost.

LATER (4 p.m.).—During the early dealings Scotch Deferred stocks were somewhat freely offered, but recovered a little at close. Grand Trunk issues rather lower, but Americans were very dull and almost lifeless till the extreme close, when there was some selling of Louisvilles and Milwaukeees.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (May 31), writes:—During the past week business has not been very active, but prices are generally better. Although the metal markets are dull, the cheap rates for money are stimulating investors. The fortnightly settlement has been satisfactorily concluded, and transactions entered into are for new account, June 14.

In shares of coal, iron, and steel companies the movements are irregular. Niddrie declined to 35s. 6d., owing to the death of the Chairman of the directors, but a recovery has set in to 38s. Bolckow Vaughan are at 10 1/2, Ebbw Vale 9, Marbella 55s., Steel Company of Scotland 54s. 6d., Stewart and Clydesdale 8 1/2, and Wilson's and Clyde 9 1/2.

In shares of copper concerns there has been little business doing. Tharsis are about 91s. 3d. Tinto declined from 14 11-16 to 14 1/2 cum. dividend, and 14 1/2 ex. dividend. Arizona are at 6s. 6d.; Tinto Second Mortgage, 102 to 103.

In shares of gold and silver mines there has been more business doing. South Africans have improved on the prospects of good crushing returns for this month. New Aurora West lower, as they have temporarily suspended the milling operations, and are limiting the working of the mine. Oregum lower, although both the new and old stamps are now said to be at full work. A dividend of 6d. is announced on Mount Morgan. May Consolidated lower on the issue of the reconstruction scheme, which provides for nine new shares to be issued in exchange for each 20 old shares. African Gold Recovery are at 35s.; Buchananland, 31s. 6d.; Bonnie Dundee, 3s. 9d.; British South Africa Chartered, 35s.; Broken Hill, 53s. 6d., extra dividend; Caratall, 61.; Cassel, 20s. 6d.; Champion Reef, 79s. 6d.; Day Dawn P.O., 3s. 9d.; Etwyn Bray, 3s. 6d.; Emma, 4d.; Flagstaff, 7d.; Gold Fields of M. rone, 23s.; Glencairn, 35s.; Golden Gate C.T., 1s. 3d.; Holcomb Valley, 1s. 3d.; Joe's Luck, 1s. 9d.; Lion-Berlyn, 3s. 3d.; Mosambique, 14s.; New Louis d'Or, 5s.; New Geston, 13s. 9d.; Orita, 2s. 9d.; Sheba, 29s.; Springfield, 2s. 6d.; St. Augustine, 1s. 3d.; South African Trust and Finance, 2s. 3d.; Tolima A, 7 1/2; True Blue Block, 2s. 6d.; and West Argentine, 1s. 9d.

In shares of miscellaneous companies there is not much alteration to notice. The report of the Young's Paraffin Company for last year states that the profits have been interfered with by miners' strikes, but amounted to £26,000. The current year's prospects are better, as coal is cheaper and the price of ammonia has improved. Broxburn Oil are at 8 1/2, Lillithgow 19s., Lawes' Chemical 6 1/2, Nobel's Explosive 12 1/2 ex dividend, Phoenix G.ano 72s. 6d., Robarite Explosives 22s. 6d., South Australian Petroleum 3s., and White Lead 4s. 3d.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of May 31:—Caledonian Deferred and North British Railway stocks, after being strong, have relaxed, and now show reductions of 1/2 and 5-16 respectively. Highham has advanced 1. A feature of the market has been the steady demand for debenture guaranteed and other high class stocks, which, in many cases, have advanced 1 to 2 per cent, and in some cases more. Bank shares have been in demand at higher prices. Bank of Scotland have risen from 329 to 330; British Linen from 385 to 390; Royal from 237 to 246 1/2; Commercial from 67 1/2 to 70; National from 338 to 340; Union from 21 1/2 to 21 1/2. Clydesdale have declined from 20 1/2 to 20 1/4. In insurance shares Life Association have risen from 39 to 40; Scottish Union and National A from 79. 3d. to 81s.; Standard Life from 59 to 60. North British and Mercantile have declined from 36 cum to 34 1/2 ex dividend of 10s.; National Guarantee from 70s. 6d. to 67s. Cowdenheath Coal have risen from 14 1/2 to 14 1/4. Niddrie and Benhar were pressed for sale, and fell to 35s. 6d., from which they have recovered to 37s. 9d. Arizona Copper 6d., lower at 6s. 6d. Oils still neglected. Coats 8s. 9d. higher at 17 1/2. Eastmans up from 73s. 6d. to 89s. 6d.

The Golden Slope West is one of the latest finds in South Australia. It belongs to two prospectors, who, in the early part of April, when prospecting at about 5 inches from the surface, found a stone, which, on breaking, showed gold freely. They at once set to work and found a splendid reef. It already shows 4 feet, and there is a rich leader of about 3 1/2 inches.

THE EDITOR'S LETTER BOX.

* We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.

COLON GOLD MINES, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—Divers lengthy inculcations from Mr. Gledhill have from time to time deluged your columns with querulous complaints against the Colon Mines and Mr. Russell, their superintendent, and, although these have contained many allegations, garbled or fictitious, I have hitherto been content that the same should carry their own condemnation into the minds of such readers who are conversant with or interested in the subject matter.

Mr. Gledhill, however, from the safe distance of some 6000 miles, has now waxed so bold as to accuse Mr. Russell of administering, and the Alcalde of the district of accepting, a bribe to pervert justice in the country under the protection of whose laws Mr. Gledhill lives. It has, therefore, become impossible for the Colon Company to pass in silence so audacious a charge without requesting you to give its unqualified contradiction the like publicity.

In England, the wholesome dread of criminal prosecution for libel is sufficient to deter a litigant from making the charge which Mr. Gledhill so recklessly launches from the seclusion of his Colombian farm.

Nor is it apparent from Mr. Gledhill's letter, on the face of it, why he is at the pains to exude the column and half of matter published in your last issue, for, with an unusual modesty, he omits to mention that he has any interest, pecuniary or otherwise, in the doings of the Colon Company. He disguises his personality under the veil of "an unsuspecting estate owner," though for what reason, after being for the past five years the head and front agitator against the company, Mr. Gledhill now seeks to pose as the "innocent abroad" is best known to himself. Can it be that he fears that the spectacle of a litigant openly telling his unvarnished tale of a matter *sub judice* will not commend itself to English eyes? But, whatever the reason, it is common knowledge that so soon as this company began to mine Mr. Gledhill came down with a heavy claim for damages to his lands (the justice of which this is not the time or place to discuss), that he instigated and fomented enormous claims of a like character by his Colombian neighbours; that so soon as the company found it impossible to come to any reasonable arrangement by reason of the impracticable state of the law prevailing, it, in spite of the unsparing vituperation and prejudice verbally and by means of scurrilous pamphlets disseminated throughout the Republic against the Colon and all other English hydraulic mining companies in that country, succeeded in obtaining from the Government of Colombia a decree defining the law to be that such alleged damage was to be defined and assessed by arbitration. Mr. Gledhill has ever since unremittently applied himself to rendering this decree nugatory by taking advantage of every legal technicality and quibble to prevent the damage, which he professes to have sustained, being assessed by arbitration, and not satisfied with this vent for his energies, he stoops to stir up strife between the company and the township of Guayabal, whom the company, at a large outlay, has supplied with a bountiful supply of pure water at their doors to their great contentment.

If Mr. Gledhill's claim has any solid foundation, why should he so strenuously resist its assessment by arbitration? The answer is, because he prefers to value his farm at twice the price he paid for it, and then to talk about an "amicable 5 per cent." on what he is pleased to call its value.

he so persistently urges on them; pity though it be both for the company and the mining industry in Colombia to see a rich mine perforce be idle, it is preferable to winning its gold merely to distribute it in feeding Mr. Gledhill and his following with the bread of idleness.—I am, Sir, yours obediently,

F. E. LAMBERT,
Secretary Colon Gold Mines (Limited).

30th May, 1894.

THE SILVER QUESTION—NO. 3.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR.—Great Britain has restricted its issue of silver coin (1) to the necessity for change, and (2) limiting its legal tender power to £2 only. Consequently it has sustained no monetary injury from the fall in the price of silver.

On the other hand, the following 10 countries have very large issues of "legal tender" silver coin, which they try to work *pari passu* with their gold coin. The countries named are:—America, Austria, Belgium, France, Germany, Holland, Italy, Russia, Spain, and Switzerland. They have issued gold coin to the amount of £532,000,000.

They have also "legal tender" silver coin outstanding to the amount of £313,000,000, circulating side by side with the gold coin. This is a very serious position, and an imperative reason why they should join in an international compact, as suggested. India has silver coinage to the amount of £180,000,000, with only a nominal amount of gold. There is another £100,000,000 of "limited tender" silver coin issued by them, including the £20,000,000 of Great Britain issued as stated above, which makes a gross total of £593,000,000 of silver coin outstanding in the commercial world. The figures herein are from the United States reports of July, 1893.

We cannot tell the weight of silver in such coin. We do know, however, that the silver contained therein has fallen 50 per cent. below the datum line of 60d. per ounce, which fall equals £296,500,000, an enormous shrinkage on the original value. The present bullion value is much less still. To increase the quantity of silver in the new coins by 12d. per ounce, at the datum line of 60d., would require many thousands of tons of silver, and would surely cause a steady appreciation in its value.

The fact that the nations named were all improving their coinage in the manner stated would of itself give new assurance to the silver market, and, ere long, the advance would bring silver up to 50d., and perhaps more. The seigniorage is still ample to cover all cost, and no nation joining therein would sustain any loss by thus immensely improving its silver coinage. By such action silver would resume its former place as one of the money metals of the world.—Yours, very respectfully,

Cornwall, May 31, 1894.

NANCY COWEN.

REPORTS FROM THE MINES.

We find it necessary to announce that, owing to the vast numbers of mining reports, and items of mining intelligence which reach us invariably very late—up to, and frequently after the time of going to press—it is impossible to guarantee the insertion of all of them in the issue in which, in ordinary course they should appear. We always endeavour, however, to make this important feature as complete as possible, and if the secretaries of mining companies, mining captains, and others would kindly make an effort to let their reports, etc., reach us early on Fridays, when it is not possible to let us have them earlier in the week, their doing so would go far to ensure their insertion, and to promote the completeness of our Mining Intelligence.

BRITISH MINES.

DRAKEWALLS.—J. Hosking and T. Chapman, May 31: During the past week the shaftmen have made fair progress in sinking. The distance sunk in the four weeks was 2 fathoms 5 feet 6 inches. The 160 cross cut is without change.

GREEN HURTH.—May 25: South west branch above 30 fathom level I am pleased to report an improvement at the south forehead, this has been without ore for the past three weeks, and is now worth for lead 1 ton per fathom. The heading behind the forehead is not so rich this week, worth 1½ tons per fathom.—Annie's Vein: The south forehead, also the heading above, continues to yield good ore, worth for lead 1½ and 2 tons per fathom respectively. The south driftage from the sump on the above vein is looking better to-day, worth for lead 3½ tons per fathom.—W. Gray.

GREAT LAXEY.—May 29: Although prolonging the stoppage a little, the repairs to the pumping wheel, referred to in last report, afforded a good opportunity for giving some of the pitwork an overhauling, which was done, and pumping duly resumed. All is now in good working trim, but the large accumulation of water in the bottom of the mine will probably take three weeks yet to pump on. Dumbell's shaft is now at the depth corresponding with the 295 Welsh shaft, and a small well or dip made for water. Cross cutting will at once be started towards the lode. The 278 level north has been opening ground in the past three weeks, ranging in value from £10 to £20 per fathom, the present value of the driving being the former value. At this point there is a small slide, which in the level above caused a throw of the lode about 2 fathoms to the hanging. So far there is no clean cut off, but the lode heading round with the slide. The rock is a little harder and more compact in the 255 and north, otherwise there is no change to report. The stopes, &c., at the various levels are at present worth, on an average, about £12 per fathom.—W. H. Rowe.

PRINCE OF WALES.—S. Roberts, J. Prowse, May 30: In the cross cut north at the 193 fathom level (which is now driven 25½ fathoms) there is not quite so much hard capel and spar, and better progress is being made in driving.

WEARDALE LEAD.—Report on Weardale Company's Mines for week ending May 26: Groverake: Adamson's drift west vein 3 to 4 feet wide, of spar and rider, worth 14 cwt. per fathom. Cubic fathom stopes worth 14, 14, 12, 12, 12, 12, and 12 cwt. per fathom.—Boltsburn: A cross cut south from Watt's level, east of Baty's ground, has been started to prove flats further east. At present principally lime mixed with sparry strings. Stopes above Watt's level in vein and south flats worth 24, 34, 34, 30, 20, 28, 16, 22, 18, and 18 cwt. per fathom. Stopes in north flat worth 24 cwt. per fathom.—Greenlaw: Nattrass Gill drift stopes worth 12, 14, and 12 cwt. per fathom. Lee's sump stopes worth 12 and 18 cwt. per fathom. 28 blings of ore raised for the week in Greenlaw's vein and strings by tributers.—Sedling: The 64 level east has been driven 43 4-6 fathoms. The stopes in 64 level east and west are worth 14, 14, 16, 18, and 16 cwt. per fathom. The cross cut north from the shaft bottom is in 16 4-6 fathoms. The beds are dipping 4 feet in the fathom, forehead in slate. The drift east from the shaft foot has been driven 5-6 fathom this week, strong vein composed of quartz, floor, rider, and a little ore. Stopes in south vein, Stobb's drift, worth 14 cwt. per fathom. Ore raised for week 79 tons, ore dressed for week 180 tons, ore and slag smelted for week 141 tons, producing 74 tons of pig lead.

WHEAL KITTY (St. Agnes).—William Teague, John Dunn, Charles Cole, May 25: In the 60 fathom level driving east of crosscut on the south lode, we have gone through a valuable piece of tin ground about 6 fathoms in length, which have been regular and well defined, and worth for tin £16 per fathom, and to-day it is producing some splendid stones of tin, and equal to its former value, viz., £18 per fathom. In the 60 fathom level driving east of crosscut on Joe's lode, we are pleased to state that this end is also improving, and worth for tin £10 per fathom. In the 24 fathom level driving south of the slide, the men are making very good

progress in driving, and the end is letting out a little water. We have suspended work in the western part of the mine, on Pryor's lode, which for some time past has been very poor. The new discovery in the south part of the mine is quite up to our expectations, and we are still of the opinion that our prospects are more cheering than they have been for many years past.

WHEAL GRENVILLE.—May 28: Gould's engine shaft is sunk 7 fathoms below the 232 fathom level. The 232 fathom level east of Gould's is being driven by a boring machine and is worth £15 per fathom. At the 220 fathom level, about 90 fathoms east of Gould's we are sinking a winze in a lode worth fully £45 per fathom. This winze is about 25 fathoms in advance of the 232 end; when these are communicated it will lay open a good run of tin ground. Fortescue's engine shaft is sunk 15 fathoms below the 225 fathom level. We have just met another dropper coming in from the south side on the lode which, for the moment, has lessened its value, but we are hopeful it will soon improve. It is now worth £75 per fathom. The 225 fathom level east of Fortescue's is worth £15 per fathom. The 225 fathom level west of Fortescue's is worth £16 per fathom. We are rising with a machine in this level, and the rise is worth £20 per fathom. There is no change in any of the ends or stopes to note since last reported. We consider the prospects of the mine are good.—(Signed) E. F. Bishop.

COLONIAL, INDIAN, AND FOREIGN MINES.

DE LAMAR.—Copy of Capt. J. W. Plummer's monthly report for April: Mining—Ore Breaking Department: Wilson vein, above the third level, the vein is 2 feet 9 inches wide, assaying £18 in gold and \$4 in silver, equal \$22 per ton. 77 feet vein, above the fifth level west second ore body, the vein is 3 feet wide, assaying \$18-10 in gold and \$1 in silver equal \$19-10 per ton. 77 feet vein above the sixth level, the vein is 5 feet 9 inches wide, assaying \$1-90 in gold and \$23-98 in silver equal \$25-88 per ton. 77 feet vein above the seventh level, the vein is 7 feet 9 inches wide, assaying \$14-90 in gold and \$7-76 in silver equal \$22-66 per ton. 77 feet vein above the eighth level east, the vein is 3 feet wide, assaying \$8-26 in gold and \$22-34 in silver equal \$30-60 per ton. 77 feet vein above the eighth level west, the vein is 5 feet wide, assaying \$18-60 in gold and \$2-60 in silver equal \$20-20 per ton. 77 feet vein above the ninth level hanging wall section, the vein is 4 feet 3 inches wide, assaying \$24 in gold and \$5-50 in silver equal \$29-50 per ton. No. 5 vein above the sixth level, the vein is 5 feet 3 inches wide, assaying \$27-11 in gold and \$3-37 in silver equal \$30-48 per ton. No. 5 vein, above the eighth level, the vein is 7 feet wide, assaying \$36-55 in gold and \$1-66 in silver, equal \$38-21 per ton. No. 5 vein, above the ninth level the vein is 5 feet wide, assaying \$29-70 in gold and \$14-24 in silver, equal \$43-94 per ton. No. 6 vein above the ninth level the vein is 2 feet 9 inches wide, assaying \$30-30 in gold and \$6-80 in silver, equal \$37-10 per ton. No. 7 vein above the seventh level the vein is 8 feet wide, assaying \$21-10 in gold and \$3-08 in silver, equal \$24-18 per ton. No. 7 vein above the eighth level the vein is 3 feet wide, assaying \$23-37 in gold and \$1-53 in silver, equal \$24-90 per ton. No. 7 vein above the ninth level the vein is 3 feet 3 inches wide, assaying \$32 in gold and \$5-50 in silver, equal \$37-50 per ton. No. 8 vein above the eighth level the vein is 2 feet wide, assaying \$27-20 in gold and \$5 in silver, equal \$32-20 per ton. No. 9 vein above the seventh level the vein is 7 feet 6 inches wide, assaying \$26-87 in gold and \$2-25 in silver, equal \$29-12 per ton. No. 9 vein above the eighth level the vein is 8 feet 3 inches wide, assaying \$20-92 in gold and \$6-28 in silver, equal \$27-20 per ton. No. 9 vein above the ninth level the vein is 3 feet wide, assaying \$20-47 in gold and \$5-08 in silver, equal \$25-55 per ton.—Prospecting Department: The height of the raise in 77 feet vein ninth level east is now 63 feet, assaying \$2-85 in gold and \$34-40 in silver, equal \$37-25 per ton. This raise is on the hanging wall section. 77 feet vein ninth level east drift, hanging wall section, reported last month 89 feet 6 inches, advanced for month 27 feet 3 inches, total length 116 feet 9 inches. The vein is 5 feet wide, assaying \$15 in gold and \$9 in silver, equal \$24 per ton. The No. 5 vein, winze below sixth level, is 2 feet 6 inches wide, assaying \$24 in gold and \$1-25 in silver, equal \$25-25 per ton. Present depth 53 feet 6 inches. No. 5 vein sixth level hanging wall section east drift is 5 feet 6 inches wide, assaying \$18-05 in gold and \$4-20 in silver, equal \$22-25 per ton. No. 7 vein 6th level east is 2 feet 6 inches wide, assaying \$30 in gold and \$4 in silver, equal \$34 per ton. No. 7 vein seventh level west drift has been advanced 11 feet during the month, total length 87 feet. The vein is 2 feet 9 inches wide, assaying \$18 in gold and \$2-50 in silver, equal \$20-50 per ton. No. 9 vein seventh level west, previously reported 157 feet, advanced for the month 35 feet 3 inches, total length 192 feet 3 inches; the vein is 6 feet wide, assaying \$27-34 in gold and \$1-48 in silver, equal \$28-82 per ton. No. 9 vein eighth level west, previously reported 289 feet, advanced for month 30 feet, total length 309 feet. The vein is 1 foot 10 inches wide, assaying \$39-60 in gold and \$8-40 in silver, equal \$48 per ton. No. 9 vein ninth level west, previously reported 184 feet 3 inches, advanced for the month 21 feet 6 inches, total length 205 feet 9 inches. The vein is 2 feet 8 inches wide, assaying \$18-70 in gold and \$3-32 in silver, equal \$22-02 per ton. No. 10 level cross cut south, previously reported 87 feet, advanced for the month 41 feet 3 inches, total length 128 feet 3 inches. The ground is of the usual character. No. 10 level crosscut north, previously reported 60 feet, advanced for the month 49 feet 6 inches, total length 109 feet 6 inches. The cross cut level has passed through the 77 feet vein, which resembles the 77 feet vein as cut at the ninth level (immediately above it) in every particular, both levels having cut into it at its western end and away from the line of ore body.—Crosscut from the 9th Vein, 8th Level, towards 10th Vein: Previously reported 34 feet 6 inches; advanced for month 18 feet 6 inches; total length 53 feet. There is nothing of interest to report.—7th Level East, Iron Dyke: Advanced for the month 24 feet 3 inches. This is temporarily suspended, and the 5th level resumed. The distance between the 5th and 7th levels is considered too great to admit of economical exploration, and the 6th level east will be extended into the silver region, carrying on the work in the two places simultaneously.—Sommercamp Group: The Sommercamp Group tunnel is being cleaned out. It has caved in places during the past winter, as soon as this is repaired the exploratory work will commence.—Milling Department: The clean up on April 1 consumed 12 hours, and during the month there was but little detention in our milling operations from any cause.—Table of work performed for April, 1894: Number of wet tons crushed 3454-95 tons. Number of dry tons crushed 3090-06 tons. Assay value of the pulp \$29-38. Gold \$23-18. Silver (at 60 cents) \$6-20. Assay value of the tailings \$4-81. Gold \$3-87. Silver \$0-94. Percentage saved 83-63 per cent. Number of Doré bars produced 22 bars. Number of ounces pure gold produced 2567-676 ounces. Number of ounces fine silver produced 28,937-10 ounces. Value of gold produced \$51,351-52. Value of silver produced \$17,491-07. Ore shipped during the month \$7874-00. Bullion differences \$1877-63. Miscellaneous revenue \$871-14. Total \$79,465-36. Deduct all expenses for the month \$37,216-05. Estimated profit for month (or at \$4-90 to £ sterling, £8622) \$42,249-31.—Pelton Wheel: The wheel commenced its duty on April 5. Its power was gradually increased as the snow disappeared from the banks of the ditch. Everything connected with the mine and mill is in good order and working smoothly.

DON PEDRO.—May 2: Mine report No. 8: Lode under No. 8 Shoot: In the past month the inclined rise from the 60 fathom has been put up 12 feet. For the last two weeks we have had a large quantity of water issuing from a hole near the back, and bringing with it fine mineral of a low grade. The surrounding lode is not disturbed, which leads me to suppose that the water comes from a considerable distance through a fissure. The level north at the 50 fathom has been driven 24 feet. There is lode within 3 feet of the bottom of the level. The mineral broken has the same characteristics as that from the rise, and is equally uneven in quality.—60 Fathom Crosscut: For the latter half of the month this end has been troublesome. The last set was difficult to fix, but in excavating for another we find the ground a little firmer. A stopes, driven since its resumption 9 feet, is turning out very fair

quality mineral. On opening on the vertical rise on C stopes the timber was found to be so upset that before working the stopes we should have to renew the timber for several feet. As this would incur a large outlay without producing mineral I decided to leave the stopes until A has been driven far enough east to put up a fresh rise in front of the present breast of C, and extract the remaining mineral without interfering with the old workings. Vertical rise risen for the month 16 feet. Another stopes has been started south of A.—Pumping machinery: On the 30th a new rope was put on the upper transmission bands. This occasioned a stop of 6½ hours, during which the machinery at the mouth of the mine was overhauled, and some repairs, &c., to the pumps executed. On the 14th and 29th respectively, 9 feet carrying sheaves were repacked, the rider being used in both cases. Hitherto the packing of a 9 feet sheave caused a three hours stop, but with the rider only two stops of five minutes each, to ship and unship the 3 feet sheaves, are required.

MOUNT ZEEHAN (Tasmania).—Manager writes for week ended April 17: Argent Section: Main engine shaft, No. 6 lode, intermediate level south stoped 47 feet by 7 feet, but ore kept below, as mill is engaged treating ore from Zeehan-Montana Company. Lode 1 foot wide of good milling ore. 72 feet level south risen 22 feet 3 inches, and holed to intermediate level. Lode 2 feet 6 inches to 3 feet 6 inches wide, showing good milling ore throughout. 74 feet level north, stopes continued, but ore kept below. Lode 1 foot 6 inches wide of fairly good second. 132 feet level north, stopes south of rise continued. Lode is about 9 feet wide, carrying good milling ore of rather better quality than before. 132 feet level south, drive south extended 10 feet, total 43 feet. Lode 1 foot 6 inches wide, one-third carrying nice strings of galena. In another week expect to reach shoot out in 72 feet level. Have let contract to crosscut west to No. 7 lode. No. 3 lode, No. 2 shaft sunk 5 feet, total 43 feet 8 inches. Lode same as last reported.—Tributing: Argent tributaries have sold 14 tons firsts, assaying 67 per cent. lead and 90 ounces silver. Concentrator has run 60 hours on Zeehan-Montana Company's ore, and milled 208 tons second for 39 tons 13 cwt. concentrates, containing about 29½ tons lead and 3846 ounces silver.

MOUNT LYELL.—The London committee have received the following report from the Melbourne board—viz., for week ending 12th April:—Engine Shaft, 100 feet Level: The western cross cut has been driven 3 feet 6 inches, total 62 feet 6 inches. The face is in solid pyrites. 50 feet level south drive has been advanced 5 feet, total 86 feet. The rock driven through has been very hard ironstone, but is improving now. Stopping has been carried on northerly from the west cross cut; at this point there is a bunch of high grade ore lying on the footwall of the ore body. The stopes over the north level are unchanged. In No. 2 shaft, 100 feet level, the western cross cut has been advanced 8 feet in fair driving ground.—No. 5 Tunnel: The contractors have driven 16 feet for the week, total 501 feet. The face is now in schistose rock, easy ground to work.—Ore raised: 51 bags weighing 2 tons 6 cwt. 2 qrs. 2 lbs., and containing 9634 ounces of silver, or an average of 4144 ounces per ton. 16 bags of ore weighing 14 cwt. 0 qr. 12 lbs., and containing 494 ounces of silver, or an average of 744 ounces per ton have been bagged and sampled.—Ore dispatched: 168 bags weighing 9 tons 2 cwt. 1 qr. 24 lbs., and containing 8454 ounces of silver have been dispatched from the mine.

NEW QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers, April 13: Underlie Shaft: The underlie shaft has been sunk a further depth of 15 feet, making 49 feet from No. 5 plat with about 18 inches of formation. No stone at present.—No. 4 South Level: Stopping has been carried on over this level, the formation being from 3 to 10 feet in width. The reef is very irregular, varying from 3 inches to 1 foot, and a considerable portion of this stopes is blank. No. 5 south level has been extended a further distance of 15 feet, making a total distance of 228 feet from underlie shaft. There is every indication of reef making in the end of level. Stopping has also been carried on; the reef is very much split up into leaders through the formation, and a lot of time is taken up in keeping the quartz clean. The reef varies from a leader to 8 inches. No. 5 north level has been extended a further distance of 12 feet, making a total distance of 147 feet from underlie shaft. The formation in the face is about 1 foot in width, carrying a few thin leaders.—No. 4 Formation: The No. 1 northern level has been extended a further distance of 18 feet making a total of 217 feet from underlie shaft; the formation is about 7 feet in width, carrying a thin leader on the hanging wall. Stopping has also been carried on. The reef in this stopes has improved a little during the fortnight, varying from a leader to 1 foot in thickness.—No. 1 South Level: We resumed work in this level last Wednesday, the ground in the face is very hard. The reef averages about 7 inches.—No. 1 Formation: The winze in the No. 2 north level has been sunk a further depth of 12 feet, making a total distance of 100 feet from level, which finishes the present contract. There is no change.—Quantity of stuff raised during the fortnight: Quartz No. 1a level, 10 trucks; quartz No. 4 south level, 180 trucks; quartz No. 5 south level, 216 trucks; quartz No. 4 formation, 50 trucks; approximate weight 290 tons, 426 trucks.—(Signed) W. Henderson.

NO. 7 NORTH-EAST QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers, April 13: Since my last report Roberts and party from the stulls over No. 5 level have crushed 33 tons for 11 ounces 5 dwts. 9 grains of melted gold, since then they have given up the block. I have let a small block to Tonken and party between the No. 4 eastern level and the intermediate level, also one to McFadden and party over the No. 4 west level, and a block to Shaw and party over the No. 1 east level. Perry and party under No. 3 level have from 10 to 12 inches of stone in the face. Gonion and party in the stulls over No. 3 level are turning out a fair amount of crushing stuff. Hall and party under No. 1 west level have from 8 to 9 inches of stone in the face. Total amount of stone raised from the different parties 50 tons.—(Signed) H. Davis.

SPITZKOP FARM.—Manager reports for week ending April 28 10 Stamper Mill: Worked 72 hours, crushed 98 tons of mixed ore. The plates are looking about the same as usual.—Reef Hill: The ore has been got from the creek below the mill.—Hydraulic: Two monitors worked 5½ days of 10 hours each during the week. The wash is looking about the same. New water road has been made of 1083 yards for the purpose of bringing on clear water to blanket trough, and to carry away the debris from the grists.—Old Water Races: Have commenced cleaning them out, as they are full of grease and dirt.—Under date May 2 the manager writes as follows: Hydraulic operations will be continued a few weeks longer, as nice rains have fallen since my last, and both dams are full.

THISTLE REEF.—The mine manager, Mr. Arden, reports under date Barbarton, May 3, as follows: Mine: A-I wrote you very fully last month, I have not much news to send you. There is no material change as far as the reef is concerned, except that in the low level drive. It is still getting broader as I advance, and much harder, and is good enough to send to the mill, as it contains besides a small quantity of free gold a considerable amount of pyrites. The upper drive continues as before, and here I am driving and turning as hard as I can. Since starting the main drive on low level has been advanced 12 feet, and the upper level 13 feet. From the stopes I have extracted, roughly speaking, from 30 to 40 tons pay ore, so that I have found it absolutely necessary to very much enlarge the dump heap, as I intend collecting all the pay ore at present extracted and stacking same at low level dump ready for transporting to battery. I have a white man and some natives cutting timber, and picking out the best I can find for the mine, and as we shall require a large amount, am securing all I can get hold of.—Buildings: The store room is erected near the main drive and native quarters.—Machinery: Everything has been unpacked, and is now drying.

CAPTAIN WILLIAM EDWARDS sailed on Saturday last from Southampton, by the City of Paris, to take the sole management of the Flagstaff Mines.

AUSTRALASIAN MINING.—Fortnightly report of Captain John James, mine manager, dated April 12: In the underhand stope going north on the Orient reef, there is about 2 feet of crushing stuff showing a little gold. In the stopes over the level going south, there is from 6 to 15 inches of crushing stuff showing a little gold. In the stopes above the 690 feet level, there is about 15 inches of crushing stuff, showing a little gold. Everything about the mine and winding engine is in fair working order. There are 30 men employed.

ALAMILLOS.—Mine report, dated May 23: In the 160 fathom level driving west of Taylor's engine shaft, valued at $\frac{1}{2}$ ton per fathom, the lode is wide, and good progress is being made in driving. The lode in the 100 west of Judd's engine shaft is small, and produces stones of lead; worth $\frac{1}{2}$ ton per fathom. Isidoro's winze sinking below the 70, valued at $\frac{1}{2}$ ton per fathom, has holed to the 100 fathom level.

ALMADA AND TIRITO.—Report for month ending 28th April: Dia Padre: The 350 feet level driving north is now communicated to Pacheco's winze, and within a few days we shall commence to drive north of this winze, it being found necessary to take down a heavy side on the hanging wall before commencing—four men. The 250 feet level driving north has been extended 18 feet 1 inch. The lode is poor, but is large, and carries a well defined wall—four men. The 250 feet driving south has been driven 10 feet 3 inches by two men during the month. The lode has improved during past few days, and is yielding some good stones of copper glance.—Stopes: The stope back of the 166 feet north of Cruz Verde and also back of Intermediate 12 fathoms level are yielding good quantities of fair grade ore. The stopes back of the 12 fathoms level at No. 2 and 14 winzes are yielding ore in paying quantities.

ANGLO-MEXICAN MINING.—Writing on April 26, with regard to the gold mine at San Jose de Gracia, the manager says:—Extraction of ore: Total number of cars of milling ore extracted and placed on the patio up to date, 300.—Muertos tunnel: During the past week our work in this tunnel, has developed nothing calling for special comment from me. Progress has been quite satisfactory, and this favourable rate will be maintained. Most of the bad ground is behind us, and from now on our object will be to widen out the old workings here and lay out the car track.—Guadalupe tunnel: The ore on the hanging wall side of the vein appears to be of good quality, while the streak on the foot wall largely consists of decomposed vein matter. Writing on April 22, with regard to the Yedras Mine, he says:—East drift, No. 1 from Zaplen shaft: I am pleased to be able to say that this drift continues to present the favourable appearance mentioned in my last report, the face of same carrying ore 5 feet in width, and assaying 138 ounces per ton. The stopes above and below this level also continue in good condition, yielding a handsome daily output of high grade ore.—West drift, No. 2 from Zaplen shaft: I am glad to say that during the past week an improvement in the grade of the ore encountered in this drift has taken place. A sample taken across the face of the drift yesterday yielded 101 ounces per ton. The width of the ore continues as at last report—that is 3 feet.—Coches drift: Since reporting to you last on the condition of this drift a change for the better has again taken place here, which I sincerely trust may lead to more encouraging developments before long. With the last blast fired last night a stringer of ore has been uncovered on the foot wall side of the vein, measuring about $\frac{1}{2}$ foot in width, and presenting a very promising appearance. A sample taken from this stringer assayed 40 ounces per ton, which is by far the best result we have had in the Coches for quite a time. The vein itself continues strong, fully 5 feet in width, with remarkably well defined walls.

BECHUANALAND EXPLORATION.—The general superintendent reports:—We have broken through Chimborazo reef at a depth of 30 feet, at which depth the reef is 2 feet 9 inches wide; it looks and pans well. We are starting another shaft 300 feet to the north and on the reef. On the Outward Bound reef we have sunk 30 feet, at which depth we have broken through it; it is the richest thing seen in this country, carrying heavy visible gold, the reef being 3 feet wide. Men of long experience in mining on the Rand, Barberton, and generally throughout the Transvaal, inform me that they have never before seen so much quartz carrying such good prospects as they have seen brought in here almost daily by our prospectors and others. The results of our development are most promising, and the number of reefs already discovered in the country is really astonishing. I may say that our prospects were never brighter. I propose making Bulawayo our headquarters. It is very healthy, and the fact of there being no cases of fever amongst our staff during the past rainy season speaks for itself. You will be pleased to learn that the Mining Commissioner speaks highly of the Cotopaxi Mine, belonging to the Gold Fields of Mashonaland Company, in which this company is so largely interested. He also speaks in high terms of Captain Morrish, and of the manner in which he has developed the mine and put up the machinery. I may say that this is the universal opinion of everyone who has been over that property. The Mining Commissioner says the mine looks better than ever.

CALIFORNIA MILLING AND MINING.—Return for April month: Mill: Custom ore treated 13254 tons, California 48 tons, total 13734 tons for the month, with an average of 50 stamps dropping. We have entirely rebuilt the first section of 25 stamps, and restarted the same on May 3rd, the whole working admirably. The second section of 25 stamps is now pulled down, and will be rebuilt before the end of May. The supply of ore offering being now very large, and the water in the gulch ample to drive the whole mill, we propose postponing the rebuilding of the third section until the autumn, when the water power diminishes.—Mine: About 20 tributaries are at work in various parts of the mine, all obtaining some ore at a profit to the company. The crosscut south of the 300 has cut the new vein, which is about a foot wide and of promising appearance. We are now daily expecting to cut the Governor Adams vein, where we hope to find good ore. Total receipts for the month \$338,914; total expenses exclusive of \$400 paid on account of rebuilding of mill, \$363,669; profit for month \$702,45.—(Signed) A. L. Collins.

COMORANDEL.—Superintendent's report for fortnight ending May 5:—Comorandel Shaft: The 420 feet level north has been driven further 26 feet; distance from shaft 130 feet 10 inches. There is about 15 inches of lode matter in the end, with stringers of quartz, but nothing to value. 420 feet level south driven 10 feet, total 70 feet. This end is still very hard, and the branch of quartz followed is as present only 3 inches wide. 320 feet level north driven 14 feet 6 inches, total from crosscut 360 feet. The lode here has during the past week pinched to 4 inches in width, but shows signs of improvement in the present forebore.—Prospect Shaft: This has been sunk to 800 feet and a level started northwards at this depth. When this has got a little distance from the shaft we shall put out crosscuts east and west to thoroughly explore this ground. 500 feet level north of winze has been driven 12 feet 7 inches on a small lode, which carries a little gold. The end is now 70 feet 2 inches from winze, and its drive will be pushed on as rapidly as possible to communicate with the shaft at 500 feet. 440 feet crosscut north has been extended during the fortnight 20 feet 3 inches. There is no change in the ground.—North Trial Shaft: The level south from bottom of shaft has been driven a further 57 feet. We have had a small lode in this drive, varying from 8 inches to 2 inches in width, the quartz from which shows free gold in the piece.

GRAVEN'S CALEDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, April 12: I have started an underhand stope from No. 9 level at a depth of 25 feet, and there is about 1 foot of reef in the present face. No. 9 level has been extended a further distance of 9 feet, making a total of 207 feet from the slide. There is about 10 inches of reef in the lode at present. In the first two stopes over this level the reef is about 10 inches thick, in the next two 8 inches thick, and in the other one 10 inches. No. 8 level has been extended a further distance of 6 feet by Jones and party, making a total of 314 feet from the slide. The reef in this level remains the same. In No. 1 stope over this level the reef is about 8 inches thick, and in the other four stopes it will average fully 9 inches. In the stopes over No. 7 level

the reef still remains about 6 inches. No. 6 level has been extended a further distance of 7 feet by three men on wages, making a total of 339 feet from the slide. The reef in this level is about 8 inches thick. In the stope over this level the reef is about the same. The cross cut which we are putting in on the hanging wall in No. 4 level has been extended a further distance of 15 feet, making a total of 28 feet from the drive, and I expect to break through into No. 5 stopes at any time. The haulage of quartz for the fortnight is 129 tons, 106 tons of which has been carted to the mill.—(Signed) G. Cabassi.

CHAMPION REEF.—Fortnightly report of Captain James Rowe, superintendent, dated 7th May:—Dalyell's Shaft: The 685 feet level south has been driven 40 feet, total length 70 feet 6 inches. Lode disordered and unproductive.—Garland's Shaft: This has been sunk in the dyke 8 feet, total depth 657 feet 3 inches. The 530 feet level north of west crosscut driven 31 feet 9 inches, total length 414 feet 3 inches. Lode 3 feet wide, assaying 17 dwts. of gold per ton. Winze below 530 south of crosscut sunk 25 feet, total depth 32 feet. Lode 3 feet wide, assaying 1 ounce 10 dwts. 14 grains of gold per ton. The 440 feet level north of west crosscut driven 23 feet 6 inches, total length 384 feet. Lode 2 feet wide, assaying 1 ounce 15 dwts. 5 grains of gold per ton. No. 2 rise in back of level risen 14 feet, total height 33 feet 9 inches. Lode 5 feet wide, assaying 1 ounce 3 dwts. 14 grains of gold per ton. Rise in back of 440 south of west crosscut risen 16 feet 3 inches, total height 66 feet 6 inches. Lode 2 feet wide, assaying 2 ounces 12 dwts. 19 grains of gold per ton. 340 feet level south of west crosscut driven 33 feet 9 inches, total length 124 feet 9 inches. Lode 3 feet wide, assaying 1 ounce 8 dwts. 14 grains of gold per ton. Rise in back of level risen 16 feet 6 inches, total height 19 feet. Lode 3 feet wide, assaying 17 dwts. 15 grains of gold per ton. No. 2 winze below 340 north sunk 10 feet, total depth 65 feet. Lode 3 feet wide, assaying 2 ounces 15 dwts. 5 grains of gold per ton. No. 1 rise in back of 240 north of west crosscut risen 8 feet 6 inches, total height 27 feet 11 inches. Lode 2 feet wide, assaying 1 ounce 18 dwts. 9 grains of gold per ton. New winze in bottom of 240 north of west crosscut near end sunk 6 feet 6 inches, total depth 6 feet 6 inches. Lode 3 feet wide, assaying 1 ounce 10 dwts. 12 grains of gold per ton.—Ribblesdale's Shaft: This has been sunk 10 feet 3 inches, total depth 509 feet. Lode small and without value. The 440 feet level south of shaft has been driven 18 feet 9 inches, total length 267 feet 8 inches. Lode very small and without value. 440 feet level north of winze sunk below 340 north on south part of fold driven 35 feet 3 inches, total length 92 feet. Lode 5 feet wide, assaying 2 ounces 17 dwts. 12 grains of gold per ton. 340 feet level south of shaft driven 19 feet 3 inches, total length 600 feet 5 inches. Lode $\frac{1}{2}$ foot wide, assaying 2 ounces 5 dwts. 16 grains of gold per ton. Winze below level sunk 17 feet 9 inches, total depth 42 feet. Lode 1 foot 3 inches wide, assaying 2 ounces 11 dwts. 14 grains of gold per ton. Rise in back of level risen 15 feet 9 inches, total height 24 feet 3 inches. Lode 1 foot wide, assaying 1 ounce 11 dwts. 15 grains of gold per ton. No. 1 rise in back of 240 south of shaft risen 6 feet 9 inches, total height above the 200 feet level 28 feet 6 inches. Lode 3 feet wide, assaying 1 ounce 3 dwts. 13 grains of gold per ton. Winze below the 240 south sunk 6 feet 6 inches, total depth 108 feet 9 inches. Lode 9 inches wide, assaying 3 ounces 2 dwts. 8 grains of gold per ton. New rise in back of 240 north of shaft risen 11 feet 3 inches, total height 11 feet 3 inches. Lode 1 foot 3 inches wide, assaying 2 ounces 13 dwts. of gold per ton. This is to communicate with stope below 200 feet level south.—Carmichael's Shaft: The 315 feet level north has been driven 12 feet 9 inches, total length 584 feet 6 inches. This is communicated with 315 south of Rowe's shaft. New Rise in back of level risen 11 feet. Lode 3 feet wide, assaying 1 ounce of gold per ton.—Rowe's Shaft: The 315 feet level south of shaft has been driven 11 feet, total length 63 feet. This is communicated with 315 north of Carmichael's shaft. 315 north of shaft driven 8 feet, total length 8 feet. Lode 1 foot wide, assaying 1 ounce 18 dwts. 20 grains of gold per ton.—Stopes: Dalyell's shaft: Stope in back of 620 north, north of rise cut 15 fathoms 5 feet 9 inches. This is suspended for a time. Stope north of 530 south winze cut 10 fathoms 5 feet 6 inches. Lode 3 feet wide, assaying 1 ounce 16 dwts. 10 grains of gold per ton. New stope south of winze cut 1 fathom 3 feet 6 inches. Lode $\frac{1}{2}$ foot wide, assaying 12 dwts. of gold per ton. Stope in back of 530 south north of rise cut 3 fathoms 4 feet. Lode $\frac{1}{2}$ foot wide, assaying 2 ounces of gold per ton. Stope south of rise cut 4 fathoms 3 inches. This is suspended. Stope below 390 south, north of 440 south rise, cut 3 fathoms 2 feet 6 inches. Lode 14 feet wide, assaying 2 ounces 5 dwts. 21 grains of gold per ton.—Garland's Shaft: Stope in back of 530 north of west crosscut north of No. 1 rise cut 2 fathoms 2 feet. Lode 3 feet wide, assaying 1 ounce 16 dwts. 9 grains of gold per ton. Stope south of rise cut 1 fathom 5 feet. Lode 1 foot 6 inches wide, assaying 1 ounce 4 dwts. 16 grains of gold per ton. Stope in back of 440 north south of No. 1 rise cut 3 fathoms 3 feet. Lode 6 feet wide, assaying 2 ounces 4 dwts. 13 grains of gold per ton. New stope in back of 240 north of west crosscut north of No. 2 rise cut 2 fathoms 2 feet. Lode 2 feet wide, assaying 1 ounce 18 dwts. 22 grains of gold per ton. Stope south of rise cut 13 fathoms 5 feet. Lode $\frac{1}{2}$ foot wide, assaying 2 ounces 1 dwts. 5 grains of gold per ton. Stope in back of 340 south of west crosscut, cut 1 fathom 2 feet 6 inches. No sample taken. Ribblesdale's shaft: Stope in back of 340 north, on north end of fold, cut 20 fathoms 4 feet 6 inches. Suspended for a time. Stope in back of 340 north, south of No. 2 rise, cut 1 fathom 1 foot 3 inches. Lode 3 feet wide, assaying 1 ounce 7 dwts. 5 grains of gold per ton. Stope in bottom of 240 north, north of winze, cut 7 fathoms 5 feet 5 inches. Lode 4 feet wide, assaying 2 ounces 1 dwts. 8 grains of gold per ton. Stope in bottom of 200, south of 240 north rise, cut 3 fathoms 5 feet 6 inches. Lode $\frac{1}{2}$ foot wide, assaying 2 ounces 7 dwts. 2 grains of gold per ton. Stope in bottom of 200, north of 240 south rise, cut 6 fathoms 3 feet. This is suspended. No. 1 new stope in back of 200 south of north rise cut 5 fathoms 1 foot 8 inches. Lode $\frac{1}{2}$ foot wide, assaying 1 ounce 10 dwts. 13 grains of gold per ton. No. 2 new stope in back of level cut 5 fathoms 3 inches. Lode 3 feet wide, assaying 1 ounce 18 dwts. 13 grains of gold per ton. Stope north of rise in back of 200 north of No. 2 rise in back of 240 south cut 15 fathoms 4 feet 4 inches. Lode 6 feet wide, assaying 15 dwts. of gold per ton. This is suspended for a time. Stope south of No. 1 rise in back of 240 south cut 6 fathoms 4 feet 8 inches. Lode 6 feet wide, assaying 1 ounce 17 dwts. 2 grains of gold per ton. The above stopping is for April month.—Returns: During April month 2089 tons of quartz were stamped, which produced 3051 ounces of gold, an average yield of 1 ounce 9 dwts. 5 grains of gold per ton. 1000 tons of tailings were treated, which yielded 243 ounces of gold: A total return of 3294 ounces.—Health: The health of the employees is fairly good.

FORTUNA.—Mine report, dated May 23: Canada Inco's Mine: In the 150 fathom level driving west of O'Shea's engine shaft the lode is a little more open, and is letting out some water. The lode in the 110, west of San Pedro's shaft, continues regular and well defined, and is valued at $\frac{1}{2}$ ton per fathom.—Los Salidos Mine: In the 200 east of Taylor's engine shaft the lode has fallen off in value, but is still laying open good stopping ground; now valued at 2 tons per fathom. The lode in the 105 east of Palgrave's shaft contains some stones of lead ore.

GOLD FIELDS OF MYSORE.—Mine report for fortnight ending May 7: Oriental lode, south shaft: The 470 feet level north has been driven 2 feet 9 inches, total length 82 feet. Lode 1 foot 3 inches wide, assaying 1 ounce 15 dwts. 5 grains of gold per ton. 470 feet level south driven 4 feet 3 inches, total length 85 feet 6 inches. Lode 2 feet wide, assaying 1 ounce 14 dwts. 3 grains of gold per ton. The 380 feet level north has been driven 3 feet 6 inches, total length 185 feet 4 inches. Lode 1 foot wide, assaying 19 dwts. 20 grains of gold per ton. 380 feet level south has been driven 6 feet, total length 174 feet 3 inches. Lode $\frac{3}{4}$ foot wide, assaying 1 ounce 6 dwts. of gold per ton. The 280 crosscut east has been driven 4 feet, total length 226 feet 3 inches. Nothing as yet met with.—Prospecting work: This is opening out fairly well. Captain Williams is sending a report by this mail.

GOLD FIELDS OF MYSORE.—Fortnightly report on prospecting operations dated May 9: West Balaghat Block, No. 1 Shaft: North drive at the bottom of this shaft has been driven 10 feet 1 inch, total distance from shaft 37 feet 3 inches. Lode in the end 2 feet wide, assaying 1 ounce 15 dwts. 5 grains of gold per ton.

South drive has been driven 11 feet 6 inches, total distance from shaft 54 feet 6 inches. Lode in the end 1 foot 10 inches wide, assaying 11 dwts. 15 grains of gold per ton. No. 2 shaft has been sunk 4 feet 2 inches, total depth 123 feet 4 inches. Lode in the bottom 2 feet wide, assaying 1 ounce 13 dwts. of gold per ton. North drive 100 feet from surface has been driven 4 feet 8 inches, total distance from shaft 58 feet. Lode in the end 2 feet wide, assaying 18 dwts. 20 grains of gold per ton. South drive 100 feet from surface has been driven 7 feet, total distance from shaft 69 feet 6 inches. Lode in the end 1 foot 4 inches wide, assaying 2 ounces 7 dwts. 3 grains of gold per ton.—No. 3 Shaft: North drive at the bottom of this shaft has been driven 6 feet 6 inches, total distance from shaft 23 feet 6 inches. Lode in the end 2 feet wide, assaying 1 ounce 18 dwts. 20 grains of gold per ton. South drive has been driven 21 feet 4 inches, total distance from shaft 57 feet 4 inches. Lode in the end 1 foot 8 inches wide, assaying 1 ounce 3 dwts. 14 grains of gold per ton. Through the last 20 feet driven the lode in this end has varied in size from 2 to 4 feet wide, showing visible gold. No. 4 shaft has been sunk 8 feet, total depth 119 feet. Lode in the bottom 1 foot 4 inches wide, assaying 9 dwts. 10 grains of gold per ton.—Road Block, Shaft No. 3 North, No. 2 Eastern Lode: This shaft has been sunk 24 feet, total depth 49 feet. Lode in the bottom 1 foot 4 inches wide, assaying 1 ounce 1 dwts. 8 grains of gold per ton.

OOREGUM.—Superintendent's report for fortnight ending 8th May: Taylor's shaft has been sunk 10 feet, total depth below the 460 feet level 100 feet. Lode 1 foot 6 inches, value 2 ounces 1 dwts. 9 grains. 460 feet level south advanced 32 feet 6 inches, total 296 feet 6 inches. Lode 3 feet, assaying 16 dwts. 8 grains. No. 1 winze 460 feet level south sunk 6 feet, total 16 feet 3 inches. Lode 1 foot 6 inches, value 2 ounces 5 dwts. 17 grains. No. 2 winze same level commenced; 4 feet sunk. Lode 3 feet, value 2 ounces 3 dwts. 13 grains. Wallroth's shaft sunk 10 feet 3 inches, total 844 feet 9 inches. Lode 2 feet 3 inches, value 10 dwts. 21 grains. 760 feet level south advanced 28 feet, total 148 feet 6 inches. Lode 1 foot, value 1 ounce 4 dwts. 4 grains. No. 1 rise 760 feet level south 9 feet 6 inches risen, total 19 feet 6 inches. Lode 2 feet, value 9 dwts. 19 grains. 760 feet level north advanced 10 feet 3 inches, total 95 feet 3 inches. Lode 3 inches, value 16 dwts. 8 grains. 660 feet level south advanced 25 feet 3 inches, total 519 feet. Lode 2 feet, value 10 dwts. 21 grains. No. 1 winze 660 feet level south sunk 3 feet 6 inches, total 53 feet 6 inches. Lode 2 feet 6 inches, value 1 ounce 5 dwts. 6 grains. No. 2 winze same level sunk 4 feet 6 inches, total 35 feet 9 inches. Lode 9 inches, value 18 dwts. 6 grains. No. 3 winze sunk 4 feet 9 inches, total 19 feet. Lode 1 foot, value 14 dwts. 4 grains. No. 1 winze 660 feet level north sunk 6 feet, total 47 feet 9 inches. Lode 3 feet 6 inches, value 1 ounce 2 dwts. 560 feet level south advanced 16 feet, total 870 feet 3 inches. Lode 2 feet, value 2 ounces 5 dwts. 17 grains. No. 2 winze 560 feet level south sunk 1 foot 9 inches, total 61 feet 6 inches. Lode 9 inches, value 1 ounce 1 dwts. 17 grains. No. 3 winze same level sunk 2 feet 9 inches, total 50 feet 3 inches. Lode 2 feet, value 1 ounce 1 dwts. 19 grains. No. 4 winze sunk 4 feet 3 inches, total 59 feet 6 inches. Lode 2 feet 6 inches, value 2 ounces 9 dwts. No. 5 winze sunk 5 feet 6 inches, total 57 feet 6 inches. Lode 2 feet, value 1 ounce 12 dwts. 16 grains. No. 6 winze sunk 5 feet 6 inches, total 53 feet 3 inches. Lode 9 inches, value 1 ounce 17 grains. No. 3 winze 480 feet level south sunk 3 feet 9 inches, total 48 feet 6 inches. Lode 2 feet, assaying 3 ounces 8 dwts. 21 grains. No. 6 winze same level sunk 7 feet, total 91 feet 6 inches. Lode 1 foot 6 inches, value 1 ounce 12 dwts. 16 grains. No. 7 winze sunk 2 feet 9 inches, total 81 feet. Lode 2 feet, value 1 ounce 3 dwts. 22 grains. 215 feet level north advanced 19 feet, total 359 feet. Lode 9 inches wide, assaying 1 ounce 12 dwts. 16 grains. Incline winze on point of fold 215 feet level north sunk 28 feet, total 78 feet. Lode 1 foot 6 inches, value 13 dwts. 2 grains. Low's shaft sunk 6 feet, total 569 feet 10 inches. 510 feet level south advanced 6 feet, total 123 feet. No lode. Level north on branch in crosscut west from 510 feet level advanced 2 feet 6 inches, total 7 feet 6 inches. Branch of quartz 3 inches wide, assaying 15 dwts. 6 grains. Level south on same branch commenced, 1 foot 3 inches driven, quartz 8 inches wide. No sample taken. Probyn's shaft sunk 9 feet, total 969 feet 3 inches. 950 feet level south advanced 14 feet, total 95 feet. Lode 1 foot 3 inches, value 10 dwts. 20 grains. No. 1 winze 950 feet level north sunk 3 feet, total 26 feet 6 inches. Lode 1 foot, value 6 dwts. 12 grains. 850 feet level south advanced 10 feet, total 230 feet; no lode. No. 1 winze 850 feet level south sunk 4 feet 6 inches, total 41 feet. Lode 1 foot 6 inches, value 1 ounce 1 dwts. 19 grains. No. 1 rise 850 feet level south 11 feet 6 inches risen, total 54 feet 6 inches. Lode 1 foot 3 inches, value 12 dwts. per ton. No. 2 winze 650 feet level south sunk 2 feet 3 inches, total 57 feet 9 inches; no lode, now suspended. Stopes for the month Taylor's Shaft: Back 360 feet level south stopped 22 $\frac{1}{2}$ fathoms. Lode 3 feet 6 inches, value 2 ounces 1 dwts. 9 grains. Bottom 280 feet level south stopped 35 fathoms. Lode 7 feet 6 inches, value 1 ounce 11 dwts. 22 grains. Back 280 feet level south stopped 28 fathoms. Lode 2 feet 6 inches, value 3 ounces 8 dwts. 6 grains.—Wallroth's Shaft: Back 560 feet level south cut 11 fathoms, lode 3 feet 6 inches, value 1 ounce 3 dwts. 17 grains. Bottom 560 feet level north stopped 9 $\frac{1}{2}$ fathoms. Lode 1 foot 9 inches, value 3 ounces 6 dwts. 10 grains. Bottom 460 feet level north stopped 6 $\frac{1}{2}$ fathoms. Lode 1 foot 6 inches, value 2 ounces 7 dwts. 21 grains. Bottom 360 feet level south stopped 40 $\frac{1}{2}$ fathoms. Lode 2 feet 6 inches, value 2 ounces 5 dwts. 21 grains. Back 360 feet level south stopped 14 fathoms. Lode 1 foot, value 2 ounces 6 dwts. 19 grains. Bottom 360 feet level north stopped 14 fathoms. Lode 1 foot 6 inches, value 2 ounces 3 dwts. 13 grains. Bottom 280 feet level south stopped 37 $\frac{1}{2}$ fathoms. Lode 3 feet 4 inches, value 1 ounce 16 dwts. 14 grains. Bottom 280 feet level north stopped 4 $\frac{1}{2}$ fathoms. Lode 1 foot 6 inches, value 2 ounces 7 dwts. 2 grains. Bottom 215 feet level north stopped 16 $\frac{1}{2}$ fathoms. Lode 1 foot 6 inches, value 1 ounce 19 dwts. 20 grains.—Low's Shaft: Bottom 430 feet level south stopped 4 fathoms. Lode 1 foot, value 1 ounce 13 dwts. 18 grains. Bottom 400 feet level north stopped 8 fathoms. Lode 1 foot, value 3 ounces 5 dwts. 8 grains. Bottom intermediate level north back 200 feet level south stopped 5 $\frac{1}{2}$ fathoms. Lode 1 foot 3 inches, value 1 ounce 1 dwts. 19 grains.—Probyn's Shaft: Back 650 feet level south stopped 6 $\frac{1}{2}$ fathoms. Lode 1 foot 9 inches, value 5 dwts. 23 grains. This stope has been suspended. Bottom 550 feet level south cut 1 fathom. Lode 1 foot, value 2 ounces 2 dwts. 11 grains. Back 550 feet level north stopped 5 $\frac{1}{2}$ fathoms. Lode 2 feet, value 1 ounce 6 dwts. 2 grains. Bottom 450 feet level south stopped 4 fathoms. Lode 1 foot 6 inches, value 1 ounce 17 grains. Bottom 366 feet level south stopped 1 $\frac{1}{2}$ fathom. Lode 1 foot 6 inches, value 2 ounces 3 dwts. 13 grains. Bottom 300 feet level south stopped 4 $\frac{1}{2}$ fathoms. Lode 1 foot 3 inches, value 2 ounces 5 dwts. 17 grains.—Exploratory Work, Wallroth's Shaft: Cross cut west from the 280 feet level south towards Muncay's lode advanced 40 feet 6 inches, total 334 feet 6 inches. Cross cut east from the 280 feet level south advanced 3 feet, total 36 feet. Probyn's shaft cross cut east from the 450 feet level south advanced 35 feet, total 184 feet 6 inches. No change in the ground. No. 2 trial shaft sunk 9 feet 3 inches, total 238 feet. Lode 4 feet, value 1 ounce 17 dwts. per ton.—April Return of Gold: We confirm the following telegram sent you in code on the 3rd instant:—Quartz crushed 3079 tons. Gold obtained 5173 ounces. Tailings treated 3500 tons. Gold produced 835 ounces. Total return of gold 6008 ounces. Old mill delayed by accident. No. 3 mill will start on the 7th May. At the old or No. 1 mill there were delays, in consequence of two boilers springing a leak during the month, and minor accidents to the engine. The repairs have been executed, and the mill started for the current month on the evening of the 6th inst. We started No. 3 mill on Monday, and everything in connection with it is working satisfactorily.

CHIAPAS.—Mine report for fortnight ending April 30: Providencia No. 3 west drift driven 5 feet, total 44 feet 6 inches; out ore 3 feet wide assays gold 3 dwts. 11 grains, silver 3 ounces 15 dwts. 22 grains, copper 2.03 per cent. In value about the same as when ore was cut in No. 2 west drift, but width of ore increased from a small streak to 3 feet. We have commenced driving on ore southwards. Providencia south hill drift (prospecting) driven 47 feet and out what appears to be the cap of the ore deposit, showing copper pyrites and bournite in a few stones. Assay of such a sample

picked: Gold 1 dwt. 18 grains, silver 5 ounces 17 dwts. 15 grains, copper 5 per cent. We consider this of the highest importance, as tending to prove the probable extension of Providencia to the south south west at a lower depth. The drift is some 100 feet above the cross cut level of the old Providencia open-cut, and apparently above the limestone. Santa Fe drift driven 3 feet 7 inches, total 61 feet, assays 16 dwts. in gold, 8 ounces, 7 dwts. silver, and 5.01 per cent. copper, and 10 dwts. 9 grains gold, 7 ounces 12 dwts. silver, and 4.28 per cent. copper. Looking poorer. Course of ore now running south east or towards Taylor north west branch. Extracted 8 tons of ore. Taylor No. 3 winze sunk 8 feet, total 55 feet. No change. Taylor No. 3 stope extracted 104 tons, assays 7 dwts. to 9 dwts. gold, 6 ounces silver, and 3.11 per cent. copper. Taylor No. 2 stope no ore sent to mill from stope, assay in back of stope 7 dwts. to 9 dwts. 12 grains gold, 4 ounces 12 dwts. and 6 ounces 3 dwts. silver, and 2.64 and 2.39 per cent. in copper. Santa Fe stope extracted 140 tons of ore, assays 7 dwts. 12 grains and 8 dwts. in gold, 4 ounces 13 dwts. and 5 ounces 4 dwts. silver, 2.33 per cent. and 2.64 per cent. copper. Old Providencia extracted 159 tons of ore, assays 15 dwts. 12 grains and 1 ounce 6 dwts. 12 grains in gold, 5 ounces 19 dwts. and 10 ounces 5 dwts. in silver, and 7.67 per cent. and 5.27 per cent. in copper. Removing overburden. On the 19th shot down half the mill. On the 24th shot down mill for want of water.—(Signed) Edward T. McCarthy.

KEMPINKOTE.—Superintendent's report for fortnight ending May 8: Garland's shaft has been sunk 12 feet 3 inches making a total depth of 186 feet. Water has been a great trouble to us during the latter part of the fortnight, the volume having increased owing to the recent heavy rain. Yesterday the 183 feet east crosscut was started. Henty's shaft has been sunk 4 feet 6 inches, making a total depth of 191 feet. Sinking has been hindered by the 173 feet south drive, we are not able to work in the shaft while blasting operations are being carried on there. 173 feet level crosscut west has been advanced 4 feet 6 inches, making a total length of 26 feet. The end was suspended on the 26th ult. 173 feet south drive started on 27th April has been advanced 16 feet, total length 16 feet.

LINARES LEAD.—Mine report dated May 23: Pozo Ancho Mine: The 200 fathom level driving west of Peill's engine shaft still continues to open up good stopping ground: valued at 2 tons per fathom. In the 155 west of the same shaft the lode is small with a few spots of ore. The lode in the 178 west of Warner's cross cut is very wide and spotted throughout with lead ore. Good progress is being made in sinking No. 276 winze below the 178 fathom level, and the lode occasionally yields stones of ore.—Quinientos Mine: Taylor's Engine Shaft: The 185 fathom level driving east the lode contains good stones of ore, but not sufficient to value. In the 165 east the lode is regular and well defined, producing a little ore valued at $\frac{1}{2}$ ton per fathom. The 150 east is very open, and easy for driving, yielding occasional lump of ore, worth $\frac{1}{2}$ ton per fathom. The lode in the 130 east is small and poor.

MOUNT MORGAN (Queensland).—Further assays from Grassie workings:—Stape No. 1, March 28, 3 dwts. 6 grains. Stape No. 2, March 26, 2 ounces 9 dwts.; 27th, 4 ounces 1 dwt. 16 grains. Stape No. 3, March 28, 2 ounces 9 dwts.; March 31, 1 ounce 12 dwts. 16 grains. March 30, 1 ounce 6 dwts. 3 grains; April 2, 15 ounces 10 dwts. 8 grains. Stape No. 4, March 29, 9 ounces 15 dwts. —Cross cut North: March 26th (176 feet) 13 dwts. 1 grain; March 27th, 1 ounce 9 dwts. 9 grains; March 27th, 1 ounce 4 dwts. 12 grains; March 28th, 6 dwts. 12 grains; March 29th, 13 dwts. 1 grain; March 30th, 1 ounce 12 dwts. 16 grains; March 31st, 2 ounces 9 dwts.; April 2 (209 feet), 1 ounce 16 dwts.

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By Order of the Board,

RICHARD GARLAND, Secretary.

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31st May, 1894.

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| | |
|--------------------|------------|
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| Paid up | 600,000 |
| Reserve Fund | 150,000 |

THE COURT OF DIRECTORS of the Colonial Bank hereby give notice that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of Proprietors will be held at the Bank House, No. 13, Bishopsgate Street Within, London, E.C., on THURSDAY, July 5, 1894, at two o'clock precisely, to receive the report of the proceedings of the Corporation, and for the election of a Director in the place of William Davidson, Esquire, (deceased). John Green, Esquire, offers himself for the vacant directorship.

Proprietors are requested to take note of the following provisions of the Charter—viz:

I. Every Proprietor intending to become a candidate or to propose some other Proprietor as a candidate for the vacant office of Director or Auditor, must within ten days of the date of this advertisement signify by some writing under his or her hand, to be left within the same ten days at this office, either his own intention to become a candidate, or the name and place of abode of the candidate intended to be proposed by him or her.

II. A list of candidates, with the names of the Proprietors (if any) by whom they are proposed, will be exhibited in this office at least 14 days prior to the date of election.

III. No Proprietor will be entitled to vote at this meeting unless his or her name shall have been registered at least three calendar months prior to the date of election.

The Transfer Books of the Corporation will be CLOSED on 21st June, 1894, and RE-OPENED on the 10th July, 1894.

By order of the Court of Directors,

EDWARD CARPENTER, Secretary.

13, Bishopsgate Street Within, London, 31st May, 1894.

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GEOLOGY AND MINERALOGY OF SHASTA COUNTY.

By HAROLD W. FAIRBANKS, F.G.S.A.
From the Californian State Mineralogist.

VII.

(Continued from page 562.)

At one point on the western slope the limestone is full of finely preserved corals and brachiopod shells. This is where Dr. Traak collected the first carboniferous fossils found in the State. A narrow dyke of granitic rock outcrops between Bass and the limestone range. This consists of chlorite, quartz, and a little feldspar, and closely resembles the rock on Middle Creek below Shasta. The dyke widens northward, and at the ferry over Pitt River it is about a mile across. Here it is less decomposed, showing hornblende crystals and generally a small amount of feldspar. It might be termed a hornblende granite. It decays to a great depth, and in this decayed mass are nodules and dyke-like masses of fresh rock. From the mouth of the McCloud north to the United States Fisheries, this hornblende granite appears in contact with dark semi-crystalline rocks, probably metamorphic, or with green granular rocks closely resembling intrusive diorite, but from

Stratigraphical Relations

shown near the Fisheries, it appears that it is a metamorphic sandstone. This hornblende granite is the rock referred to by Drs. White and Becker, of the United States Geological Survey, as being older than the sandstones and slates underlying the carboniferous. However, judging from the fact that the rock is generally fine grained near the edges, and ends in very irregular and ramifying dyke-like projections, it seems that it must be intrusive and younger than the slates. From the mouth of the McCloud up Pitt River the rocks are all crystalline, or nearly so, until about a mile and a half below Silverthorn Ferry, where highly metamorphic and contorted sedimentary strata are met; strike a little east of north, dip a high angle to the east. The crystalline rocks consist of amygdaloidal diabase, diorite, and porphyries, with massive green rocks of indeterminate composition. A body of iron ore outcrops on the north side of the river. It shows a heavy gossan capping and scattered bunches of magnetite. Northward along the western slope of the limestone mountains the iron ore is thickly scattered over the surface. It is said to occur in great quantity in places. Several small developments have been made and ore shipped. The ore lies near the contact of the limestone with the eruptives. The deposit is very similar to that near Stillwater.

The scenery is very picturesque about the United States Fisheries. The McCloud is a clear cold stream of great volume, rising in Mount Shasta. On the east there extends for many miles

A High and Rugged Limestone Range,

known as the Gray or McCloud Mountains. The geological features about here are varied and of great interest. Carboniferous fossils are quite abundant, and there is a large variety of intrusive and metamorphic rocks. A short trip was made up the river, and the mountains on the east climbed until the limestone was reached. With scarcely any exception, the series of rocks exposed between the limestone and the river is intrusive. Near the river is a fine-grained diorite, then a brecciated porphyry, changing to a quartz feldspar porphyry. Above this are dykes of diorite, narrow strata of metamorphic rock, and amygdaloidal diabase in the order mentioned. The limestone rests on these intrusives and stretches out long narrow arms down the mountain to the west. Between the arms are bodies of diorite. The limestone dips north-east to east, with greatly varying angles. At one place it is not over 30°, at others nearly vertical. Whitney states that the thickness of the limestone is 1000 feet, but I believe it is much greater, probably twice that amount. At the southern end of each of the main peaks the strata seem to have been crushed upward from the south. On the western side of range the debris from the cliffs has been cemented by percolating lime water, so as to form extensive tufas 20 to 30 feet thick. Judging from the manner in which the limestone has been broken up,

The Crystalline Rocks

underneath are certainly younger. Fossils are scarce in the main body of limestone at this point. Large caves are said to exist in this limestone range, but time did not permit of their exploration. A half mile below the Fisheries the hornblende granite terminates. It is succeeded northward by diorites and feldspar porphyrites, with some greatly altered metamorphic rocks, showing a steep dip to the north-east. It seems to penetrate the semi-crystalline rocks and become fine grained on its edges, with generally a sharp contact. It is quite probable that this rock is the upward termination of a large body of granite, to which the extreme metamorphism of the sedimentary rocks is due. A little below the Fisheries a gulch comes in from the west, and it is seen that the intrusives are soon replaced in that direction by sandstones, argillites, and grauwackes, in such a highly metamorphic condition that the stratification is not often seen. The metamorphism grows less towards the west, and in the course of a mile we reach soft shales and blocky slates, with a strike a little west of north and variable dip towards the east. Black slate appear on the Sacramento River road a mile west of the Fisheries; strike east and west, dip 15° north.

The sedimentary strata about the Fisheries are very highly metamorphosed, and it is frequently difficult to distinguish them from the dykes of diorite and diorite porphyrite which occur here. Just above the Fisheries, on the west side of the river, there are dark, argillaceous, fossil-bearing strata, rather thick bedded. These contain disconnected layers of impure limestone; strike a little west of north, dip 30° to the east. The argillites and not the limestones are fossiliferous here.

A few yards to the north these fossiliferous rocks become jointed and highly metamorphosed, blending downward across the strike into rocks that become pyritiferous and very compact, then more feldspathic and granular, while the northernmost exposure is

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It is very difficult to say whether there is a direct continuation downward of the fossiliferous strata, which become more and more crystalline, or whether it is a dyke, whose junction with the metamorphic rocks cannot be seen on account of similarity of appearance. At the southern end of the argillite outcrop is a slightly porphyritic diorite, whose eruptive nature is unquestionable on account of the sharp contact which it shows.

(To be continued).

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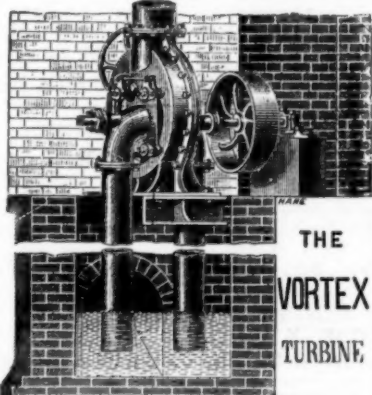
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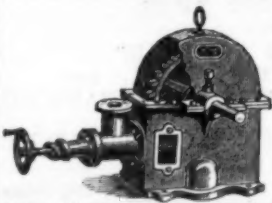


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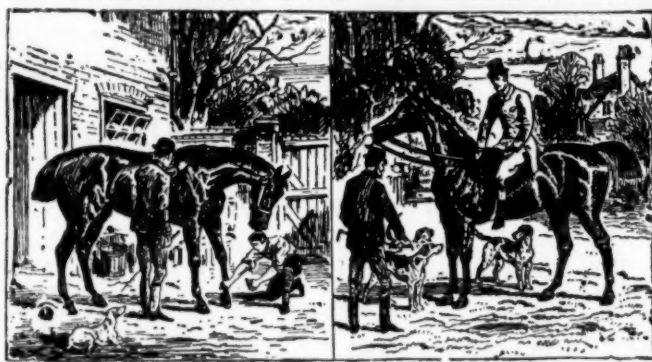
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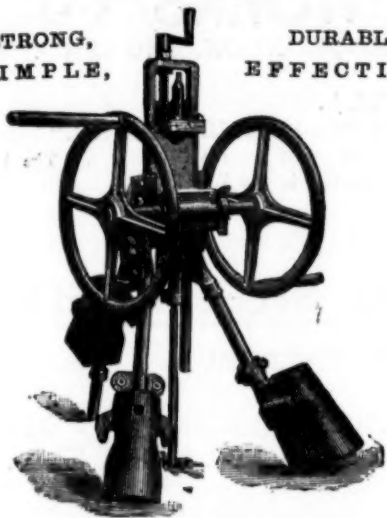
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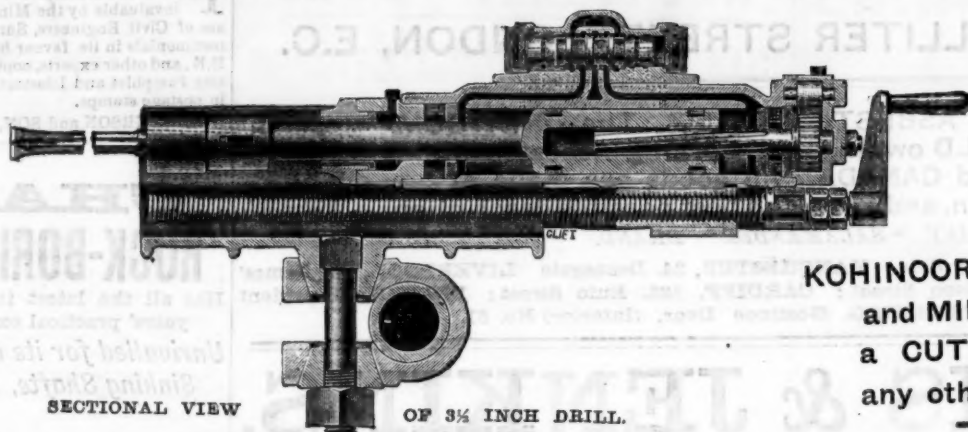
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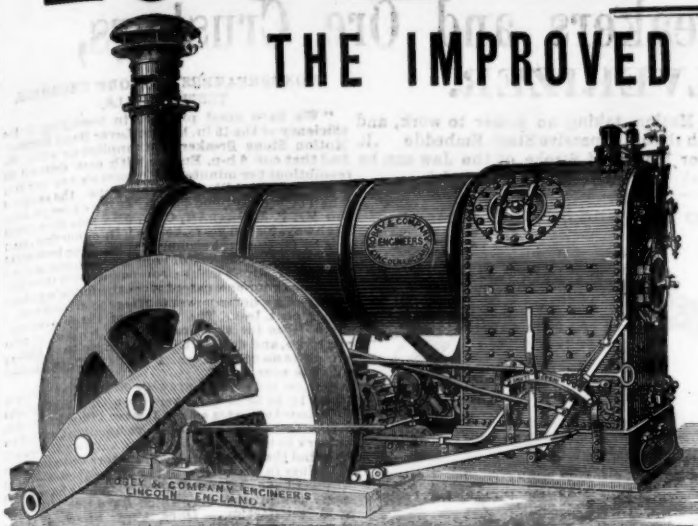
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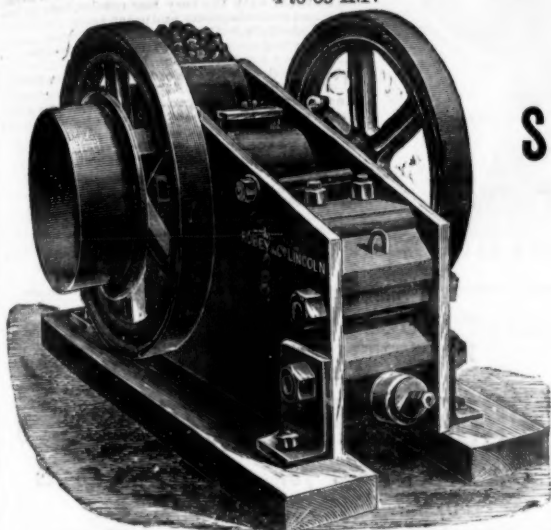


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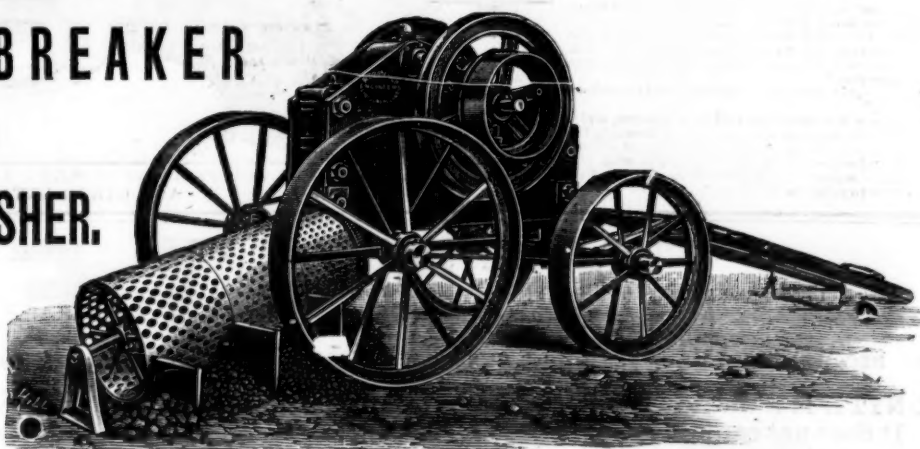
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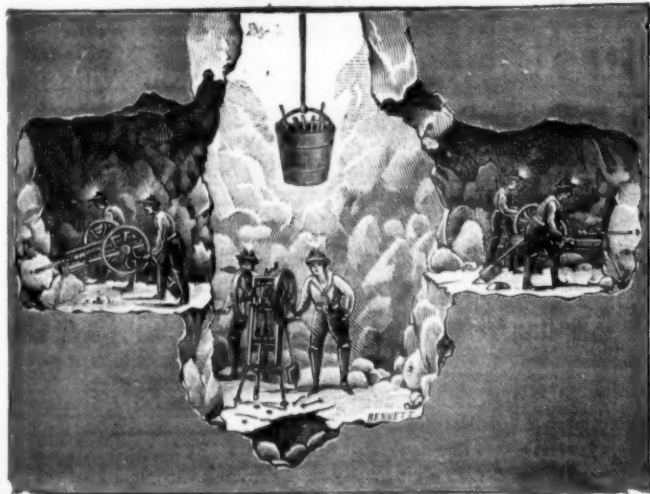
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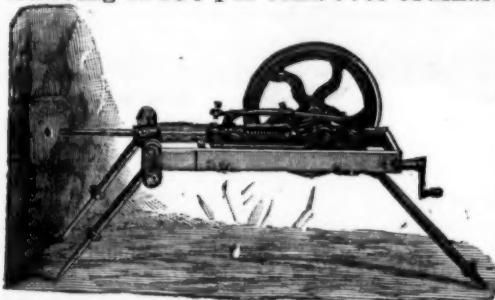
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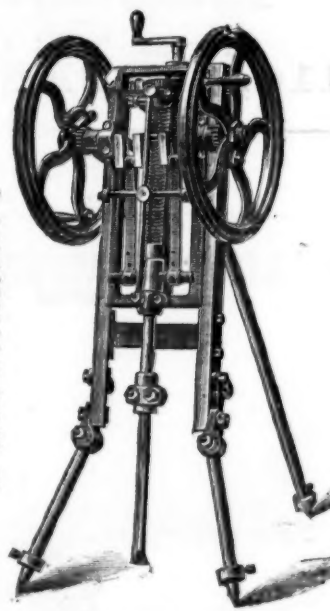
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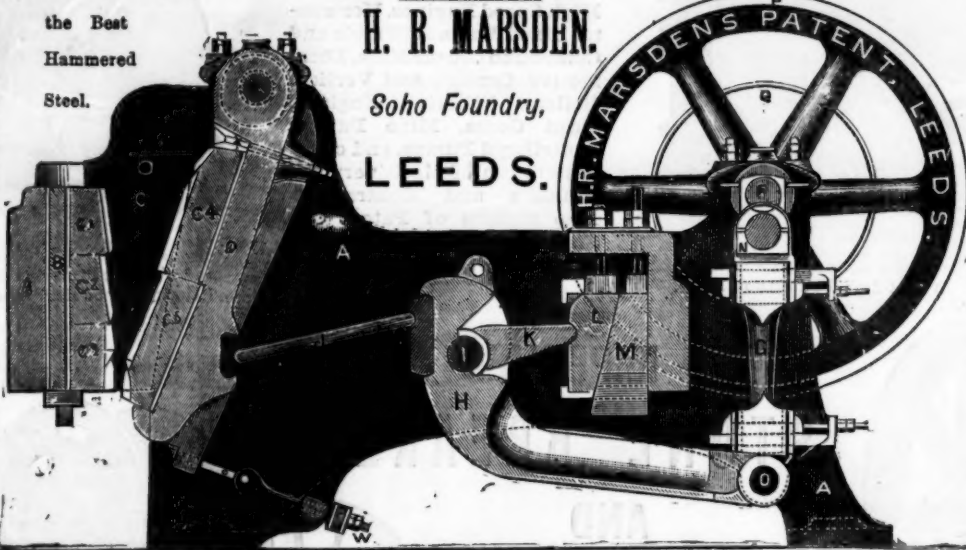
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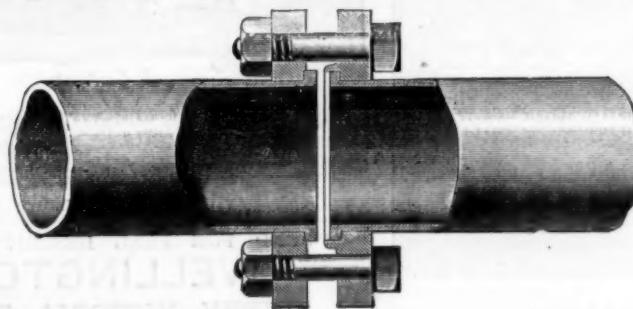
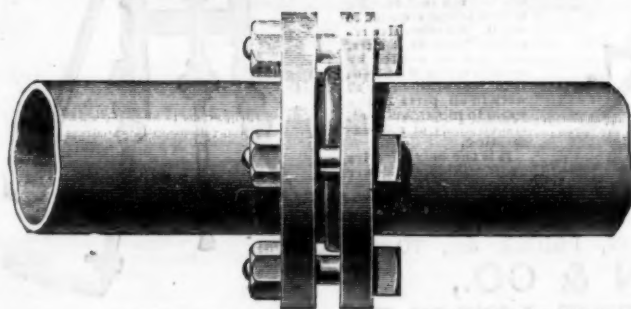
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